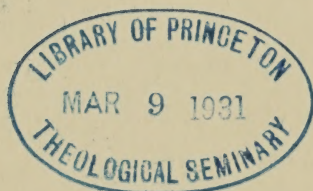


Series on Childhood Education

THE
BEGINNINGS OF ART
IN THE
PUBLIC SCHOOLS

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Division

Section

SERIES ON CHILDHOOD EDUCATION

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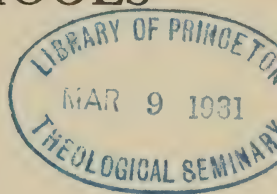


"The Storm."

Painted by first-grade child.

[See page 60]

THE BEGINNINGS OF ART IN THE PUBLIC SCHOOLS



BY

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TO
MARY REED
WHO FIRST MADE ME CONSCIOUS OF THE
NEGLECTED ART NEEDS OF CHILDREN

To Professor Patty Smith Hill who encouraged me to write; to Doctor Bessie Lee Gambrill who read the manuscript from the psychological point of view; to Doctor Frederick G. Bonser who read Chapter XIII; to Miss Gertrude I. Saastamoinen who read Chapter XV; to Mr. Clarence A. Mathias who made the photographs; to the superintendent, teachers, and supervisors of Cleveland Heights whose unusual ability, open-mindedness, and co-operation made it possible to put the theory into practice in a public-school system; to many others whose criticisms, suggestions, and approvals have been invaluable, I gratefully express acknowledgment and appreciation.

INTRODUCTION

In this volume we have a record of the art experiences and growth of children, teachers, and an art supervisor in a public-school system. In this one cannot fail to see that the author has not only a deep feeling of reverence for art, but an equally deep reverence for the child's right to grow through crude self-expression into a consciousness of better, more beautiful, and more satisfying form. One of our greatest difficulties encountered in our effort to preserve the spirit of art in the kindergarten and lower grades of our schools may be directly traced to the fact that many classroom teachers and art supervisors fail to see art expression in its relation to child nature and the laws of development.

Art ceases to be art in Miss Mathias's scheme of education, if any form or technique, no matter how good, is imposed from without. In other words, if it fails to grow out of the child's own expression and feeling of need as they lead on to higher levels of appreciation and control.

It is truly a great art to preserve the spirit of art in our public-school systems. It is so much easier to send out detailed directions and prescribed devices and lessons, than to develop in ourselves and in the teachers under our supervision a knowledge of principles, a skill in technique, and a sensibility both to beauty and expression that will serve as a compass in leading toward our goal. If with these can be de-

veloped a sense of responsibility and a critical attitude toward one's work, whether a supervisor be present or absent, we have something far more valuable and more stimulating to both teacher and child than detailed curricula with directions as to what and how, which read more like recipes for cook-books than art education.

In her school Miss Mathias has had an ideal laboratory in which to work out her art ideals. The school system was sufficiently small for her to meet her teachers frequently, not only in classes for their own art training, but in the classrooms with the children where she herself demonstrated and helped them as they gave instruction in the fine and industrial arts. In this way she was able to communicate to them not only something of her own art knowledge and skill, but also her respect for the child and his right to grow through his own expression. In addition, Miss Mathias was fortunate in serving under a superintendent who respected not only the measurable, but the non-measurable in education—one who after having selected his corps of supervisors with great care, realized that the best results could be secured only under conditions which made it possible for them to work out their own convictions with full responsibility for the outcome to him, the board, and the citizens. Finally, Miss Mathias had in her classroom teachers and supervisory colleagues a highly selected group of co-workers, who shared her vision and assumed their share of responsibility for the wide range of liberty bestowed upon them in so enlightened a public-school system.

Such freedom given to both supervisors and teachers carries with it a heavy responsibility to live up to the highest level of productivity and accomplishment, and those who accept this responsibility must realize that freedom should never be liberty to lag or waste time, but freedom to grow with the fewest hindrances to progress as manifested in positive evidences of development and achievement. Freedom is under a peculiar obligation to have its results put to the test of measurement in so far as its results are measurable. Unless we can demonstrate that freedom is the best medium for growth in both measurable and non-measurable achievements, we are not worthy of the liberty bestowed upon us. Though no satisfactory objective measures have been used by Miss Mathias in the past, she is working to secure some more objective scales and tests which may put her art results on a more scientific basis than the trained judgment of herself and her teachers. While striving for these more objective standards, Miss Mathias has tried to set up some mile-stones by which teachers may judge whether children are living up to their maximum powers in the kindergarten and the grades. What may and what should teachers in each grade expect of their children? At this time it is difficult to speak with authority. These tentative mile-stones have grown out of studying the best efforts of children on each level, and although they need to be verified with larger numbers of children, it is hoped that they will serve to stimulate teachers to inspire and expect even little children to live up to their maximum abilities.

Miss Mathias has served the Department of Kindergarten-

First Grade Education of Teachers College for several summer sessions, teaching two of the sections for kindergarten, and primary teachers, and art supervisors, in the beginnings of fine and industrial arts for young children. Miss Mathias's work has grown in and out of public-school situations. The final test of any educational work must always be the public school, planned for all the children of all of the people.

PATTY SMITH HILL.

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“A better understanding of the true usefulness of art recognizes creative power as a divine gift, the natural endowment of every human soul, showing itself at first in the form that we call appreciation. This appreciation leads a certain number to produce actual works of art, greater or lesser,—perhaps a temple, perhaps only a cup,—but it leads the majority to desire finer form and more harmony of tone and color in surroundings and in things for daily use. It is the individual’s right to have full control of these powers.”

—ARTHUR WESLEY DOW.

I

THE PROBLEM

Results have shown that our public school art courses are inadequate in that they have failed to enable the average individual to meet with intelligence the art problems that confront him. We have conscientiously provided materials, time, and skilled guidance for artistic training only to find as a product of our efforts individuals who have little or no ability to meet every-day art problems.

If we are to hope for a society with art appreciation and some ability to meet art problems, an adequate art course must provide for developing ability for self-expression and for understanding the expressions of others. Analysis of our art courses shows that ability to express oneself has been given slight consideration. On the contrary, children have been asked repeatedly to express the ideas of others; through this imitation they have acquired skill in handling materials for which they have felt no need. If one accepts the point of view taken by Doctor Dewey, that "a mode of expression separated from something to express is empty and artificial, is barren and benumbing,"* one can but question the art imposed upon children. When this principle becomes a conviction the art lesson that consists of telling the children first what to draw and then how to draw it cannot be justified.

* Dewey, John, "Imagination and Expression," p. 7, *Teachers College Bulletin*, March 1, 1919.

If education is growth,* and if growth implies increasing ability to express oneself through different media, then our art training must provide for growth in expression through the use of materials. Doctor Dewey has said: "We have plenty of glorification of Art and of the importance of artistic training, but we have almost no definite scientific attempts to translate the artistic process over into terms of its psychical machinery—that is, of the mental processes which occasion and which effect such expression."

This changed conception of art training has brought to the teacher of little children the problem of how to evaluate their early expressions and how to use them as a means to further growth in expression.

* Dewey, John, *Democracy and Education*, chap. IV. (Macmillan.)

II

ART EXPERIENCES IN CHILD LIFE

What "mental processes" have children which occasion and which effect art expression? What experiences have little children which cause them to feel the need for art media?

The story experiences of every child call for art media and art expression. The small boy explains to unseeing adults that his puzzling arrangement of lines tells the story of the Ginger Bread Boy. He draws Jack and the Bean Stalk with all its thrilling episodes. He makes the chairs and beds for the Three Bears, and models the bowls from which they ate their bread and milk.

His social experiences are interpreted and assimilated through the use of materials. He relives the circus by making the animals, the circus wagons, the tents, the rings, the ring-master and his performers. He draws and constructs to express his experiences in travelling. The train, the boat, and the automobile form centres around which he groups a great variety of observations. His experiences at home, at school, in the theatre, in the market, in the shopping district, and in the park are reinforced by means of motor expression.

Perhaps the play experiences occasion the richest expressions in early life. The impulse to play store necessitates constructing and outfitting the store and modelling fruits and vegetables or other wares to sell. Playing with dolls excites him to surround the dolls with comforts similar to his own, and he makes a house. The house must be furnished. He makes chairs and tables and beds. He weaves rugs. He

models dishes. He takes cloth and makes curtains for the windows and linens for the beds and for the dining-table. He decorates the walls, paints the floors, and adds his own touch of enrichment to each article of the equipment. As his social experience grows to include life of other lands and other times, he relives those experiences in play. He plays Indian. He makes himself Indian clothes and decorates himself and his clothes with Indian symbols. He provides himself with a wigwam and with the crude implements necessary to Indian life. He makes Indian pottery and decorates it.

The child's emotional experiences also call for expression. John comes into school eager to get his crayons to show the rainbow he has seen. Mary comes charmed with the sight of the balloon-man's wares, and delights in expressing the feeling in spots of brilliant color.

Are art principles involved in these crude attempts? In the drawing of Jack and the Bean Stalk and the Three Bears we find the need for the principles of proportion. In the modelling of the dishes for the house and in the decoration of the Indian pottery we find need for the principles of art structure. Race experience includes knowledge and skills which have been evolved through repeated attempts to gain satisfactory expression. Such knowledge and skills should assist the child as he finds himself dissatisfied with his own work and unable without help to improve it. The child, for example, who struggles in vain attempting to show distance in his drawing will find satisfaction in a few simple principles of perspective. In planning his house, an understanding of the elementary principles of rhythm, balance, and harmony will facilitate expression if such understanding comes to the child when he feels its need.



PLATE I. "I washed my doll's clothes."

The accumulated art experiences of the race will then afford valuable help to the child in the expression of his early experiences. But "education is growth." Do these activities lead to richer and broader experiences? Do the use of materials and the knowledge of principles provide for growth?

Let us follow the development of the drawing activity with a view of finding possibilities of growth. The child may begin with crude attempts at explaining Jack and the Bean Stalk and the Three Bears. Each time he draws he is so directed that he feels a little more confidence in the ability to express, and gains a little more power in the use of his medium. The knowledge of principle and the skill with the medium that he gains in drawing Red Feather will be used and added to in drawing the Eskimo Twins; that in turn will aid him more satisfactorily to express the escapades of Robin Hood and his band. The same principles that freed his expression of these stories will permit him to feel unhampered when he has maturer ideas to express. He readily uses his pencil as a means of showing the architect what he wishes. He sketches easily and naturally to aid his verbal expression.

The same principle of rhythm that the child uses in the decoration of Indian pottery may help him to design a book-cover for the *Story of Knighthood*, and later adequately to express himself in the furnishing and arrangement of his house.

As the child grows, the "mental processes" which occasion and which effect expression become more complex and demand more skill for the attainment of satisfactory expression. In order to liberate these expressions and meet the increased demands he must be supplied with the race experiences, or the "artistic process."

III

THE STEPS IN THE DEVELOPMENT OF THE ARTISTIC PROCESS

What can we learn about the development of the "artistic process" by observing little children? Let us give the small child paper, a material that is new to him. He rattles it, crumples it, twists or tears it. There is no evidence of his attempt to use it as a medium of expression. We then put clay at his disposal. He rolls it, kneads it, breaks it into small pieces, but still there is no expression. He greets each new material with an attitude of "What are you?" not "What can I do with you?" He proceeds to get acquainted. Observation shows that little children delight in the exploration of a medium. They show great interest and satisfaction in the mere activity of sawing wood, driving nails, or tearing paper. We name this period in experimenting or experiencing, "the stage of manipulation," because at this time the child is mainly interested in the activity. We observe different children handling a new material to see how long the manipulative stage lasts, and find that it varies with individuals; some children begin almost immediately to make something, while others spend a long time playing with a material without any apparent purpose.

This stage is generally thought of as characteristic of little children, but observation has shown that older children and adults pass through the same period, shorter in duration, but affording the same acquaintance with materials; they daub paint, they roll clay, apparently aimlessly, until they

arrive at the idea of using the material as a medium of expression.

After this period of apparently aimless activity in folding, creasing, and tearing the paper, the child in his play finds need for a lion. His large piece of crumpled brown wrapping-paper serves as his lion. He crumples another piece for a tiger, and soon has a forest full of animals. What is the difference between this activity and that which takes place during the stage of manipulation? The masses of crumpled paper that he calls animals may look no more like animals than the masses he tosses aside in the manipulative stage. He is beginning to use material to satisfy needs. He models from clay crude shapes which have no apparent resemblance to form. At the end of a work period one boy showed a lump of clay that indicated that he was in the manipulative stage. He volunteered that he had made a bathtub and pointed out the sides, the bottom, the faucets, and shower. During this stage the child draws remarkable pictures telling his stories. We look at them and, seeing only meaningless daubs, are astonished at the wealth of ideas the explanation discloses. He has slight interest in making his pictures resemble the objects they represent at this stage of his development.

We can designate this second period as the "stage of symbolism." His drawings are mere symbols or signs which stand for the objects, and not reproductions of them. The symbolic stage is a step in advance of the manipulative stage in that the child is using his material as a means of expression. He is giving significance to everything he does. He is unhampered by thoughts of how he does it. He is interested only in the expression. Shall we allow such disregard of technique? Doctor Dewey helps us to understand and evalu-

ate this stage. He says: "There is crudity, lack of proportion, lack of qualities of structure and form; hence symbolism serves as a sign, not as a conveyance. It serves to stimulate, to vivify; its main value is reactive, freeing the child and giving him help upon his own imagery. It must at first be judged from this standpoint, its liberating power. Once the child's imagery is awakened, then does his expression become easy, become a delight, become varied. The ship, the house, the tree are mechanical and formal and must be clothed in human form to excite interest; but as soon as the child has acquired the habit of vivifying and liberating his image through expression, then a return may take place to the original form."* We recognize here that the return to the original form has been one of our early stumbling-blocks. What shall we do with the boy who modelled the unrecognizable bathtub? He is just out of the manipulative stage, with no freedom of expression. Shall we say: "But it doesn't look like a bathtub! What could you do to make a better bathtub?" Or shall we say: "What else can you make to go with the bathtub?" Which suggestion will at this time be more likely to broaden his field of expression? In our eagerness to see the children do "creditable" work we have failed to recognize the importance of the symbolic stage. Instead of strengthening the instinctive, spontaneous expression, we allow it to be crushed through the inhibition that results from imposing technique before there is a conscious need for it.

Later the boy who paints the remarkable symbolic pictures asks us how "to make a bear." He cannot finish his picture because he cannot paint a bear. Another boy wants to know

* Dewey, John, "Psychology of Drawing," *Teachers College Bulletin*, March 1, 1919.



PLATE II. Children's work showing three stages.

1 and 2. *Manipulative Stage*—"meaningless daubs."

3 and 4. *Symbolic Stage*—pictures have meaning but are illegible unless explained. No. 3. "House, street-car, and stocking in front of barber shop." No. 4. "Giant in Castle."

5 and 6. *Realistic Stage*—pictures convey ideas. No. 5. Child tells what he did on vacation. No. 6. Child describes Indian warfare.

how he can make the wheels turn on the wagon he is making. We recognize that a return to original form has taken place. He is beginning at this stage to express himself in terms of actual facts and real situations. His expressions now are not mere symbols for his images legible only to himself, but are beginning to "serve as a conveyance" through which those images may be communicated to others. We call this period the "realistic stage" because here there is the beginning of "return to original form." Here we find the beginnings of improvement in the form of expression. The child now feels the need of help in technique, and this help leads on to richer expressions. We find that just as giving technique before the child is ready for it crushes his expression, so the withholding of the technique when he is ready for it hampers his expression.

In observing many children at work with materials and noting their progress we are unable to distinguish a definite step from stage to stage. Transition is gradual. However, thinking of the definite stages through which children pass in the use of materials helps us to direct them more intelligently.

Having observed little children handle material and having in mind the contribution of Doctor Dewey, I observed a lesson in water-color taught in the first grade as prescribed by a State course of study in art. It was the first time the children had seen water-color. "Do not touch materials until ready to begin. Put water on blue cake and paint sky. Mix green and paint grass. After it dries the teacher will tell you what to paint next." Is it surprising that our art training has failed to develop ability for self-expression?

IV

EDUCATIONAL PRINCIPLES IN CHILD LIFE

How can we help the child to grow in ability to express himself through the use of materials? When the child feels the need of the "race experience," lack of it will inhibit rather than encourage his expression. As we look at his work we feel helpless because of its crudity. There is to us apparent need for so many principles! Where shall we begin?

Modern biology, psychology, and sociology have made many contributions which will help to clarify our ideas of the needs of little children and guide us in our effort to provide for this growth. The biologist has given us enlightening facts concerning the child's physical development: *

- (1) Training is harmful when it precedes the development of the power to be trained. Training should, therefore, be given as the need for it arises and is felt by the children.
- (2) Physical and mental development are bound together; hence thinking and hand-work are closely related.
- (3) Little children cannot remain still for a long time. Therefore, situations should be provided that encourage free bodily activity.
- (4) A condition of satisfaction is essential for development.

The psychologist also has revealed facts from which we may arrive at conclusions concerning the provisions for growth: †

* Herbert S. Jennings, *Suggestions of Modern Science Concerning Education*, pp. 1-50. (Macmillan.)

† John Dewey, *How We Think*. (Heath.)

- (1) The educative process must start with and utilize the child's native equipment of instincts, emotions, and capacities.
- (2) Thinking takes place only in the presence of a problem and involves three steps:
 - (a) Presence of a problem;
 - (b) Search for means of solution;
 - (c) Testing solution.
- (3) The school should provide situations which will give opportunity to experience and supply problems, recognizing that:
 - (a) Different children will solve the same problem in different ways;
 - (b) The problems provided for must be such as will lead to growth and development;
 - (c) The span of attention of little children is short.

The sociologist has shown that if an individual is to take his place as a member of a democratic group he must have:

- (1) Ability to use individual liberty and to respect the rights of others;
- (2) Ability to give and take constructive criticism;
- (3) Ability to initiate;
- (4) Ability in leadership and "followership."

How may we use our observations of the development of the "artistic process" and the contributions of modern science in so choosing and handling the material that children need for activities that we may promote growth in expression?

V

MATERIALS SUITED TO CHILD EXPERIENCES

We must first use our observations and the educational principles cited in making a satisfactory selection of materials. We have observed little children using pasteboard, wood, yarn, raffia, reed, cloth, clay, plasticine, pencil, crayon, and paint. Some of these materials are better fitted to the needs of little children than others. The problem is: How shall we select? On what principles is selection based? By means of standards based on the principles which underlie the child's physical, mental, and social development, we may evaluate the materials. For example we may ask ourselves:

- (1) Does the material provide for free bodily activity through large work and discourage "little, intricate" work that inhibits free movement?
- (2) Does its use promote the condition of satisfaction?
- (3) Does it allow the child to begin "where he is" and utilize his native equipment?
- (4) Does it provide problems the solution of which will lead on to further growth?
- (5) Does it provide for quick work?
- (6) Does it provide desirable social situations?

Let us apply these principles in the selection and rejection of different materials for early education

Here are our modelling materials—clay and plasticine. Are they suitable materials? Which one is better? In ob-

serving children model we note that a plastic material readily lends itself to expression. The children enjoy it. Its use affords large free work; there is opportunity for growth in expression. It provides for quick work; through its use there is opportunity for forming desirable social habits. In order to decide whether clay or plasticine is better for little children, we observed the continued use of the two materials. The children showed a preference for clay. They did not like the slippery feel of plasticine. Its use did not bring the same degree of satisfaction, because plasticine does not harden. Plasticine encourages small work. Because of the greater satisfaction in the use of clay and its encouragement to larger work, we decided that clay is a better modelling material than plasticine and that it is well suited to the needs of little children.

We made similar observations with respect to paper and pasteboard. Paper is not substantial enough to permit construction of large objects that are usable. Since it is perishable there is much danger that the article will be ruined in the process of manufacture. Pasteboard is substantial enough for construction, but children have difficulty in cutting, folding, and fastening it together. The children found satisfaction in using pasteboard boxes for construction work and discovered that almost everything they wished to make was boxlike in form.

Wood is a good medium. It is substantial, provides for use of all the muscles, and children enjoy it. It provides for growth in that it affords problems for thinking and situations for desirable social development.

Among the weaving materials, raffia and reed are quite perishable in the hands of little children. Their use involves

rather intricate work. Yarn also is too fine for a weaving material. Roving is large enough to encourage large work, and enables the weaver to accomplish much in a short time.

Cloth and crepe paper are used by the children in making their costumes. Crepe paper is practical only for temporary costuming. If given a few suggestions, children can use it very effectively. Children find much need for cloth in their activities. After observing the handling of it by little children we conclude that it is a good material for little children if it is handled in such a way as to avoid "small" work.

Since children demand mediums for pictorial representation, they should be provided with that means of expression. Paper cutting and tearing is a satisfactory means of expression. Although it is generally believed that children crave pencil drawing, the pencil is too fine a tool for the small child's use. He uses that medium because he is familiar with it, for the average child has become acquainted with the pencil early in life. He readily gives up the pencil when a more appropriate drawing medium is provided. Crayon encourages larger work than the pencil and provides color. The drawing medium, however, that best satisfies the child's needs for expression is opaque water paint and large paper. It provides opportunity for large work; it enables quick work, and the color is an additional satisfaction.

Children feel the need of many different materials in the expression of their experiences. "Different children will solve the same problem in different ways." Members of one group will at the same time be using a variety of materials. However, for convenience we shall consider one material at a time.

VI

CLAY

Early Activities Related to Clay.—Children instinctively discover the possibilities of plastic materials. They roll in the snow, make prints of themselves, their hands, and their feet, and later make snow men and forts. They respond to the “feel” of mud with a similar series of activities. They dig their toes in the mud; they make impressions in it and equip a store with pies, cakes, and candy. They know the joy of the feeling of something plastic.

Joy in Clay.—Clay is the perfect plastic material. It is a sort of “supermud” which sticks together when it is wet and dries hard without crumbling. Clay allows the child to “draw in three dimensions,” unhampered by the puzzling process of representing three dimensions on two. Surely in the use of clay the “condition of satisfaction” is present! The children who have been fortunate enough to have experienced the joys of making mud pies rejoice at finding “mud” that sticks together while they model and which will not fall to pieces when it dries. The children who have missed the “mud-sand-water” joys greet the new material with such delight as can be understood only by the initiated.

First Stage: Manipulative.—Satisfied with its value as a medium, we share the children’s excitement when they have clay for the first time. They are stimulated by the new material. We are eager to see what they are going to do with

it. Mary pokes hers rather gingerly and registers surprise as she sees her finger-print left in the clay; she tries her fist and her knuckles and then feels well enough acquainted to pick it up with both hands, continuing to put it through its paces. Meanwhile, Bobby is gleefully breaking up his lump of clay and flattening the pieces on the table with the palm of his hand. Dick picks off small lumps and rolls them into little round balls. The children continue to roll, pick to pieces, flatten, and dent the clay, but no child seems to be making anything.

Progression to Symbolic Stage.—Does this mean that the children are not ready for clay? They are interested in it, but their interest lies in the activity and not the use of the material as a means of expression. We recognize the manipulative stage and let them continue their explorations and investigations. After a time we take one of Dick's little round balls and show the children the marbles he is making. We remark that Bobby is making cookies, and we wonder if Mary is making a bowl. Many of the children take the suggestion and begin to make cookies, doughnuts, cakes, marbles, balls, and apples. Some of the children continue simply to manipulate the clay. Some children rapidly pass through the manipulative stage; others are for a long time interested only in the activity.

The children are on different levels. What can we do to help them grow? "Once the child's imagery becomes loosened, then does his expression become easy, become a delight, become varied." How can we help the "child's imagery to become loosened"? During the discussion that follows the work period, we can comment on the ideas expressed. The children can look for different things that have been made. Some of



PLATE III. "Clay is the perfect plastic material."

the articles made are so "far from the original form" that they must be interpreted. The sculptor does this proudly. We do not comment on the fact that there is no resemblance to original form but, recognizing that at this time "symbolism serves as a sign, not as a conveyance," we help "loosen his expression" by asking him what he is going to make next. He is going to make a garage to keep his car in, a bowl for his fruit, or a track for his train.

Some children readily relate experiences; others are timid and hesitate to talk. Some children always have more ideas than they have time to express; others seem to lack ideas. The child who persists in playing with clay instead of making something can be helped either by asking him at the beginning of the period what he is going to make or by giving meaning to something he is modelling which has no meaning to him—as, "John is making a castle," or "Do you suppose John is going to make sticks of candy?" We may help him by a suggestion, taking the cue from his interests. John has told the class about beehives which he has seen on a visit to a farm. "Could you make them in clay to show us how they look?" This may lead to reliving other farm experiences.

Basis for Judgment in Symbolic Stage.—At this time the child is satisfied with "a sign for the thing signified." He is not ready for "improvement in technique." What then is our basis for judging growth? How can we find out whether he is progressing? "The main value of expression during this stage is reactive, freeing the child and giving him help upon his own imagery. It must at first be judged from this standpoint, its liberating power." The test for growth at this time is: "Does John have more ideas and does he express them

more readily?" One boy spent much time in the manipulative stage, his power of expression developing very slowly. However, at the end of a month he showed no lack either of ideas or of freedom to express them. Here is positive evidence of growth. Another boy modelled an apple before the first boy was out of the manipulative stage. He modelled an apple again and again. At the end of a month, when he was given clay, he modelled an apple. His technique was better than that of the first boy, but there was no growth, no "loosening of imagery."

Return to Original Form, or Realistic Stage.—Recognizing the manipulative stage as preliminary to, and the symbolic stage as the beginning of expression, what is the next stage in growth? "The reaction ought to go to the point of forming a new mode of vision and allowing this new mode of experience to control his motor expression; otherwise, after a certain point is passed, slovenly habits both of seeing and of moving are acquired." He has been "liberating his image through expression"; now a return may take place to the "original form," the realistic stage.

Need for Technique.—The child is now ready to test his articles by more mature judgments based on observation and use. He now wishes to make better apples, better cakes, and better candlesticks. He is now hampered not so much for lack of ideas to express as for lack of power over his material to express satisfactorily his ideas. What does he need? He needs a working knowledge of the "race experience"—a knowledge of how—the beginning of technique. Our basis for discussion now is not primarily: "*What* can you make to go with this," but "*How* can you make this better?"

Improving Technique through Suggestions Regarding

Utility.—Gaining better technique is a slow process. Suggestions for improvements are absorbed very gradually. What help in technique does the child need first? What standards for judgment will appeal to him? In order to give satisfaction an object must “adequately embody the idea.” If the child needs a bowl to hold fruit, the first test of the bowl is: “Does it satisfactorily hold the fruit?” The first suggestion is for the improvement of the feature that obviously keeps it from fulfilling its function as a bowl. For instance, the first essential for a bowl is that it can hold something; (2) that it have a flat bottom; (3) that its sides be of uniform thickness; (4) that it have a smooth surface; (5) that it be symmetrical; (6) that it have satisfying enrichment.

All suggestions for improvement should be, then, on the basis of utility and in terms of the child’s appreciation. For instance, it must be clear to the child that every suggestion is made in order that he may make a better bowl. A child can readily see that the bowl he has made with a round bottom will tip over easily. He will be eager to improve the bowl by making a flat bottom. Though he may not have arrived in appreciation at the point where he feels the necessity of having his bowl of uniform thickness or of smooth surface, experience with his finished product teaches him that the bowl will break where the clay is thin. Still later he desires enrichment and adds decoration.

Improvement through Knowledge of Principles.—An understanding of the principles of art facilitates satisfactory expression. In proportion to the children’s ability to appreciate them, some attention to such art principles as proportion, balance, and rhythm will help the child to “more adequately embody the idea.” Children have shown that they

feel the need for proportion in remarks they make about objects: "The candlestick looks as if it might upset." By making the base larger the small modeller establishes better proportion in the candlestick. But proportion is the satisfactory adjustment of parts; and, by making the base larger, the child recognizes greater satisfaction in his candlestick, because it can hold a candle without danger of upsetting.

A child manifests a sense of balance in a desire to make things symmetrical. He objects to an object being "lopped-sided." He criticises a handle that is so large that it looks as if it would upset the cup, and he finds satisfaction in a decoration that "fits," or rhymes with, the article it decorates.

Desire for decoration comes very early in child life. On clay products decoration may be:

- (1) Scratched on with nails or hairpins;
- (2) Pressed in: pumpkin-seeds, acorns, nail-heads, screws, thumb-prints, pencils, large beads, repeated in a unit to form borders;
- (3) Applied in color.

Children desire improvement in the surface of clay. Clay can be made smooth when wet by rubbing the surface with wet fingers; when dry by lightly sandpapering. The bottom and edges of dishes may be made smooth by pressing lightly on a flat surface.

Children should be encouraged to model from the mass. It is more direct. The coil method belongs to a later stage. This help in technique is given as the need is felt by the child. All improvement is based on "fitness to purpose" and proceeds from the obvious to the remote. Our first help, then, is concerning gross mistakes. Gradually rising standards

necessitate additional technique to produce the desired refinements.

Providing for Growth through Art Activities.—With the needed principles of technique and the underlying facts of the child's biological, psychological, and sociological development in mind, how can we provide for his growth along all these lines? In order that he may have wholesome physical growth, we encourage the feeling of happiness in activity and encourage large work. We provide for mental growth by allowing the child to utilize his native equipment. We endeavor to have every child begin "where he is"; and, by helping him to realize his problem, to arrive at a solution and to test his solution, we lead him toward higher expression.

Providing for Social Growth.—How can we provide for the development of the desired social habits through the use of clay? The social habits that can be developed in the use of clay are based on "individual liberty and respect for the rights of others," and on giving and taking constructive criticism. A group of children decided on their own rules of social conduct. They decided that, first, they must work quietly at their own places so as not to disturb others; secondly, that they must return to the crock the clay they do not use in order that it may be in good condition for others; thirdly, that they must protect their clothes, the tables, and floor (they made aprons for themselves and brought new papers for the tables where oilcloth was not provided); fourthly, that they ought to protect the fragile finished work of others as each does his own.

Class Discussion of Children's Work.—The discussion of clay work provides opportunities for giving and taking constructive criticism, for group work, and freedom to choose

work, and provides for initiative, leadership, and "followship."

A very interesting discussion about clay work was observed in a first grade. The children who were working with clay grouped themselves to talk about their finished work. The first question of the teacher showed us that the children were out of the symbolic stage and were now in the realistic stage. The question was: "Who can find the best work this morning?" It was decided that John's candlestick was the best. "I am wondering why you say John's candlestick is the best." "Because it is smooth and because it won't upset when it has a candle in it." As the children had discussed these points before and had had help in their technique, the teacher asked them to look for other results which had those qualities. They found many that showed definite improvement. The teacher then asked John if he could do anything to make his candlestick better. He said that he had tried to make a handle on it, but it wouldn't hold. Several others said that they had had trouble with handles. Here was a group problem providing the next step in their growth.

Handles cause many tragedies in clay work. Handles may be made "holdable," if made large enough and with sufficient contact. To make handles, roll a piece of clay to the right size and flatten the ends. Dip fingers in water and moisten clay. Bend the shape of the handle and attach with points of contact wet. Be sure that the ends of the handle are flattened enough to give a large surface of contact for attachment.

The teacher then showed the group how to roll clay and make handles. The discussion was so conducted that the children were constantly discovering problems, suggesting

means of solution, testing their solutions. There was an admirable readiness to give and take constructive criticism.

We noticed that during the discussion the teacher recognized that the children had varying abilities and skills. Regardless of how crudely work was done, she recognized it as worth while if it was the best the child could do. She put the stamp of her approval, with the "why," on the best work. She showed the backward child where he had made his mistakes and encouraged him to try again. As a result of the discussion all the children felt a wholesome pride in what they had done and a desire to improve it.

Basis of Judgment for Growth in the Realistic Stage.—How can we tell whether the child is growing? Our test for growth during the realistic stage is not only a test for growth in ideas but also a test in growth in control over the medium. Growth necessitates the child's doing his best work all the time. After he has added appreciation of and knowledge of how to make smooth surfaces on his clay work, he should show that finish on all his work. In the same way each new skill he acquires must be used. His standards must grow with his skill, otherwise his skill depreciates through disuse. A kindergarten teacher went into a first grade where she saw one of her "last year's boys" modelling a candlestick. She was amazed. "Why, George, you made a better candlestick than that last year!" George had not grown in the use of his material. What was the matter with George? Through lack of additional technique, as it was needed, "slovenly habits of seeing" had been acquired. The children as well as the teacher can realize that they are growing. A first-grade boy was modelling one day when a visitor approached him and asked him if he had done anything else that she

could see. He showed her a bowl which he said wasn't very good, because he did it a long time ago, when he didn't know much about clay.

Special Problems.—When we allow children to develop naturally from their own levels, special problems are met in those children who do not “run true to form.” Such cases are interesting both from the standpoint of “What causes the difference?” and “What shall we do about it?”

During the term a new boy came into our second-grade group. He said he had worked with clay before. He carefully modelled a very good rabbit. The next day he modelled a rabbit. He apparently had no special interest in rabbits, though he continued to model them. He said that he had a dog, so we suggested that he model a dog; he said that he did not know how. Investigation showed that the first time the boy had ever had clay he was taught through carefully dictated steps to model a rabbit. It had never occurred to him that he might make anything unless he had first been shown how. Thus, instead of “loosening his imagery” and liberating his expression, his first work with clay had paralyzed his ability to express, because technique for which he was not ready was given him. Our first problem was to get him to express many different ideas about child life in Holland, which was his chief interest at the time. Although he showed need of technique, discussion suggested what else he might make rather than that he improve technique. “Once the child's imagery becomes loosened, then does his expression become easy, become a delight, become varied.” Later, when he readily expressed ideas in clay, he was helped by technique toward a more satisfactory expression.

What shall we do to help the child who always looks

around to see what others are making and then "follows suit"? Children are always more or less imitative, but the child who never has anything of his own to tell has at some time been made to feel that his own ideas are not worth telling. Suggestions based upon the child's interests, and appreciation of his own original work, emphasizing the merit of the work because it is his own rather than because it is well done, will help him to gain confidence in himself.

A problem quite common is that of the child who seems to persist in the symbolic stage. He has many ideas to express, but is satisfied with the technique used on his crude sketches and contented to explain with words what they mean. This is the result of lack of help in technique when he first needed it. He has returned to original form but lacks technique to meet his needs, and as a result "slovenly habits both of seeing and of moving have been acquired." His standards can be raised by observing clay work done by others and by having a special reason for modelling an article very well. For instance, the appreciation of and desire for better technique often result from making a gift which must be well done in order to please the recipient.

Care of Clay.—The quality of work is largely influenced by materials. In order to insure satisfaction in its use, clay not only must be of good quality but also must be kept in proper condition. It may be purchased wet, ready for use or dry, in the form of flour or brick. Both flour and brick must be soaked in water and carefully kneaded before being ready for use. Wet clay is better, since no preparation is necessary. Clay should be purchased at the nearest pottery. It saves money in transportation and lessens the possibilities of its drying out before it arrives. If it is shipped in air-tight barrels

the year's supply can be cared for in the barrels. Otherwise zinc-lined boxes made air-tight or tubs with covers should be provided.

For taking care of clay in small quantities for use by the children, an earthen crock with cover should be used. The crock should be of the short and wide proportion rather than the tall and narrow, since it is more convenient in getting the clay out for distribution. Some teachers prefer a small garbage can to a crock. The can may be painted to harmonize inconspicuously with the room. It has a tight cover and has the advantage of being easier to move on account of its lighter weight and its handle.

It is very important to have the clay of the proper consistency. If it is too wet it sticks to the fingers. Effort to model it results in an unhappy sticky mass in which the children find themselves helpless, with all the feelings of being "stuck in the mud." If attempt is made to model when the clay is too dry, one discovers that it is difficult to mould and that it cracks and crumbles.

Trying a bit of the clay by rolling it in the hands will give the "feel." If it is too wet the cover should be removed and the clay allowed to dry; if too dry add water. It is well to punch holes in the clay with a small stick in order that the water may get to the bottom of the crock. Otherwise, when the clay is of good consistency on top, one may find it too hard at the bottom. When the clay is the right consistency for modelling, it may be kept so by keeping it covered with a damp piece of heavy cloth, canvas, ticking, or heavy muslin.

Very good modelling clay can be purchased for one cent a pound shipped in air-tight five-hundred-pound barrels. Four pounds per child per year will provide sufficient for the

average kindergarten or lower primary group. The amount on hand should always be sufficient to supply each child with a lump approximating a pound in weight in order to encourage large work. Hardened clay can be soaked and used again. Oilcloth should be provided for the tables. Hands are the best tools. If the children feel the need of tools, they can make themselves tools from flat sticks and hairpins. Clay tools make possible more "finish" than is desired or appreciated by little children.

In ordering supplies for clay, paint should be included, as children often wish to paint the things they model. Ordinary water-color is satisfactory if very little water is used. Show-card colors or fresco paints, such as are used for "easel" painting, are excellent. The color may be preserved by shellacking. Shellac should not be too thick; it is thinned with denatured alcohol. Enamelac may be used. It does not require shellac. Turpentine is needed to thin enamelac and to clean paint brushes used in enamelac. The clay must always be thoroughly dry before paint is applied. It is not practical¹ to attempt firing of children's clay work.

From clay, children make marbles, beads, cookies, cakes, dolls, candlesticks, dishes, baskets, nests, paper-weights, lollipops, animals, fruits, and vegetables, pen-trays, pen-and-pencil holders, files (clay base with nail upright), vases, clay-covered bottles, clay-covered test-tubes, pincushions (bowl having cotton covered with silk glued inside), bowls, ash-trays, hatpin holders, clay birds (on sticks as decoration), clay tops, and sun-dials.

Projects may be repeated with added value. Children may do again in the first grade what they have done in kindergarten. They are just as interested as when they do it the

first time; however, to be of value, the work must show improvement in technique as an indication of growth.

In consideration of its adaptability to the needs of little children, in that its use permits children to begin at their own level and grow in expression, one must agree with a very successful primary teacher who says that clay is one of our very best mediums for the art expression of little children.

VII

WOOD

Every one who has observed children at play realizes their satisfaction in making things from wood. In recognition of this pleasure the adult usually provides the child with a set of miniature tools. The elaborate chest of miniature tools of every variety and description appeals to the adult who knows carpenter's tools. It looks attractive, and attractiveness is about its only excuse for being, for the tools themselves are too small for use, and are usually made of poor material. These useless little tools have apparently been manufactured on the principle that the child should be started with a small size of every kind of tool and, as he grows, be given larger editions of the same varieties. It reminds one of the old prints showing little children dressed in small sizes of grown-ups' clothes. The evolution of the tool-chest ought not to be a procedure from tiny tools to "man-size" tools, but a progression from a few fundamental to many intricate tools. The development of standards of technique and the development of intricate tools are interdependent. At first the needs are simple, and only simple tools are essential; as better technique is desired, tools that enable more accuracy and finer work are required.

Hammer.—The first tool to be used is undoubtedly the hammer. The hammer best adapted to children's use is a small-size regulation claw-hammer. The head should be flat, with square edges. A hammer that weighs from three-quarters to a pound is a good weight. It is not helping the child

to give him a light hammer, since the weight of the hammer helps to drive the nail.

Saw.—The saw is the next tool needed. The saw should be the smallest-size regulation cross-cut saw, that size as made by most firms being 18 inches in length. Saws vary in size of teeth as well as in length. A medium saw is required for little children; if the teeth are very coarse the saw is too hard to operate; if too fine it does not saw fast enough to satisfy the child. A No. 8 saw (eight points to the inch) is well adapted to the use of little children. A back saw is not essential but is very convenient to have. A wooden mitre-box might be made in the manual-training department to fit the saw. The mitre-box and saw will afford valuable assistance in making table-legs and chair-legs square, and in sawing sections of dowelling for wheels.

Other Tools.—Children often have need for holes in pieces of wood. Provision for this can best be made by supplying a brace and several sizes of gimlet and dowel bits. A hand drill may be used for boring holes less than one-eighth of an inch in diameter. Gimlets may be purchased in various sizes and may be used successfully if drill or brace and bits cannot be furnished. Various sizes of nails should be provided. Flat-headed wire nails are best. Brads should be avoided, because the child is unable to hit them squarely on the head and will bend them before he can drive them into the wood. A No. 18 wire nail in sizes three-fourths inch and one inch, and No. 16 in sizes one and one-half and two inches, will be found most convenient for use.

Knives, chisels, and planes are tools not adapted to the needs of small children. Danger of injury in using these tools is only avoided by skill in handling. The finer and more

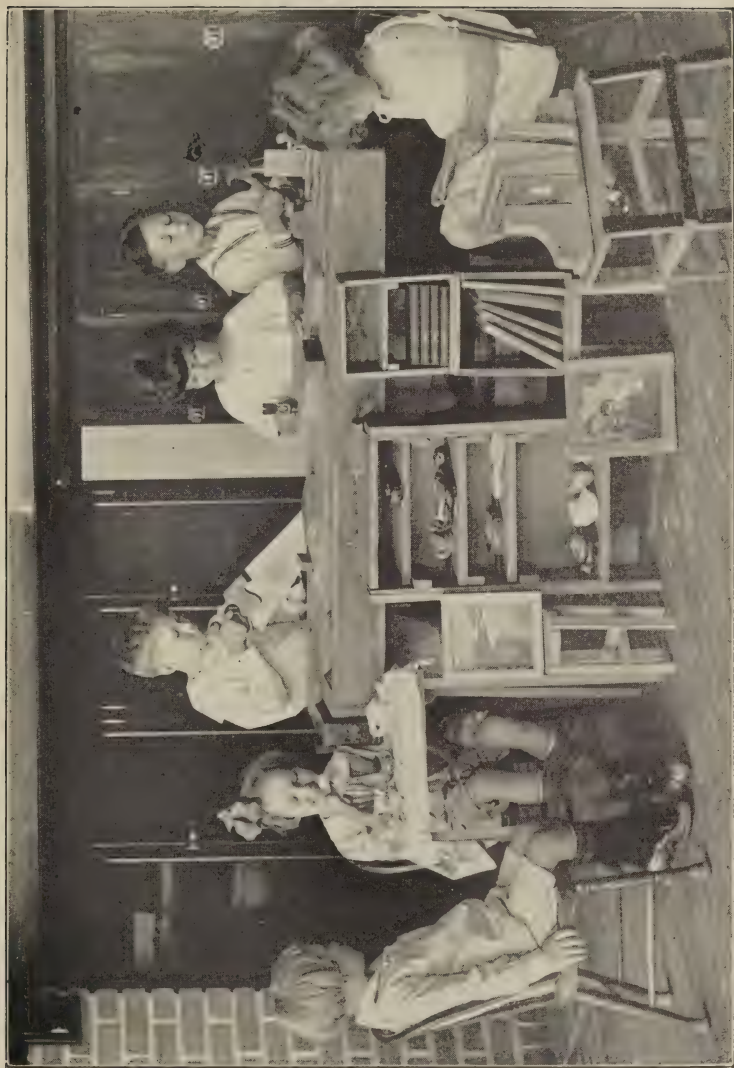


PLATE IV. "From wood, children make things satisfying the play instinct and things suggested from needs that arise in their school life."

intricate work that is made possible by the use of these tools is not demanded by little children. They are satisfied with substantial but crude products.

Children sometimes desire to give an article an additional finish after it is nailed together, although they do not anticipate it when they begin to work. For instance, the child begins to make a wagon from rough boards. He sees no need of using a plane to smooth the board before he begins to saw. However, after he sees the wagon take form, he is dissatisfied with its roughness. To provide for this desired finish a wood file and coarse sandpaper should be added to the equipment. The sandpaper should be fastened on blocks for use.

Work-Bench.—A work-bench should be provided. A small-sized, standard work-bench, 20 inches by 42 inches and 24 inches high, is adapted to the needs of little children. The price of the bench makes woodwork equipment cost more than equipment for some other materials. This need not be discouraging, since a very satisfactory work-bench may be constructed by the school carpenter. A 14-inch by 2-inch oak plank may be nailed securely to 2-inch by 4-inch supports, which are nailed to the floor. The length of the plank should be determined by the space in the room. If it is a very long plank, supports should be placed in the middle as well as at the ends. The bench complete should be about twenty-four inches high. Large wooden vises should be firmly attached at each end of the bench. Wood should always be clamped securely in a vise before children saw. Little children cannot hold a piece of wood and saw without danger. This bench provides for hammering and sawing and has several advantages over the standard small-sized bench. It provides more space for working; being made of rougher material and simpler in

construction, it is in less danger of being ruined, and it therefore allows the child more freedom for his construction work.

Wood.—Soft wood—white pine, basswood, or poplar—is best for children to work with. Hard woods are difficult to nail and are likely to split. Basswood is used for small projects, and should be one-quarter to five-sixteenths inch thick. Pine or poplar should be one-half to seven-eighths inch in thickness. Children enjoy making vehicles; in anticipation of this, three-inch dowel rods may be supplied, sections of which can be sawed off for wheels. Material 1 inch by 1 inch, 1 inch by 2 inches, and 1½ inches by 1½ inches is convenient for axles and table-legs. Scraps of wood from the manual-training department, from furniture factories, or lumber dealers are often available and afford excellent material. The size and shape of the pieces of wood suggest things that can be made.

Wood may be painted with ordinary house paint, or it may be stained, or painted with the cold-water paints, such as children use for painting pictures.

Habits Necessary to Wood Work.—As tools handled carelessly involve danger of injury, the teacher and children in one class as a precaution against accidents decided on the following definite practices in regard to the use of tools:

- (1) Children ought always to fasten the wood securely in the vise before sawing. (The vise and the saw were shown to the children together and their use explained in order to help establish the habit of using the vise in sawing.)
- (2) Children working at bench should put tools in proper place as soon as they finish.

- (3) Children should hammer and saw only on the work-bench.
- (4) Children should take turns working at the bench.
- (5) Those who are not working must stay away from the bench.

Children understand the necessity of habits for protection to themselves and furniture. They take individual responsibility in establishing these habits.

The First, or Manipulative, Stage.—What characterizes the manipulative stage in working with wood? What do children do first when provided with wood and tools? The child's first interest is in the activity of using the tool. He simply drives nails into a board. A very small child may continue to do this for a long time and then he may accidentally drive one nail through to another board, discovering that he can nail pieces of wood together. Then he may continue to nail pieces of wood together, still without making anything. His first acquaintance with the saw is followed by a similar reaction. He saws intently, but if asked what he is making, he replies: "Nothing; I'm sawing."

The Second, or Symbolic, Stage.—After the children have spent some time satisfying their interest in the activities of sawing and hammering, they begin to name their products. John had nailed two pieces of wood together, apparently without purpose. When asked about it he said it was a boat. He explained the parts. They required explanation, since the whole expression of the boat was truly symbolic and had little resemblance to original form. During the symbolic stage children make crude objects which they endow with familiar names. The peculiar product which the child calls a house

may have none of the qualifications of a real house. The things he makes in this stage are not judged by the requirements of actual conditions.

The Third, or Realistic, Stage.—The symbolic stage persists for a long time in the use of paint. But in the case of wood, the desire to make things for actual use soon advances the child to the realistic stage, when he requires that his product satisfy its conventional purpose. His boat must float; his house must provide shelter; his truck must accommodate a load. His higher standards require more technique. He learns to mark and saw the wood for the lengths he needs; he observes tables to see how he can put the legs on his table; he learns to make wheels that will turn.

The basis for all suggestions for improvement is utility. Using an article shows its weak points and provides problems. The solution of these problems provides for mental growth. For example, John has made a wagon. When he tries to use it he discovers that the wheels will not turn. What can John do to make his wagon better? Different methods of improving the wheels are suggested. John decides to use a round piece of wood for an axle and bore a hole through the centre of the wheel to fit it. The solution of one problem often gives rise to other problems, which constantly provide for mental growth. A problem, search for solution, test of solution comprise real growth.

Opportunity for Social Habits.—But few children can work at one time, because there is not sufficient equipment for wood-working. Since they have to take turns working at the bench, situations are provided for developing the desirable social habits of using individual rights and respecting the rights of others. There is also opportunity for development

of initiative and of the habit of giving and taking constructive criticism. Wood-working, furthermore, provides conditions essential to physical growth in that it involves use of the larger muscles, while at the same time it encourages the condition of satisfaction.

During self-directed activities, little children make from wood things satisfying the play instinct and things suggested from needs that arise in their school life. They frequently make vehicles, wagons, carts, automobiles, airplanes, trucks, wheelbarrows, boats, and trains; doll-houses and furniture, traffic signals, amusement parks, chairs and tables for their own use. Various specific circumstances suggest the supply of needed articles, as was the case with a group in a second grade who wanted more opportunities to paint than one easel afforded. They made an easel and stained it like the easel provided. So, too, a first-grade group put legs on a box to provide a convenient yet safe place to hold their cans of paint near the easel.

Children desire a satisfactory "embodiment of the idea" in their products. The article must fulfil its function, but the requirements are not exacting. It is a mistake to keep a child on one project until what he produces is so finished that it satisfies an adult's standard. The span of his interest and attention is short, and at this time the quantity of the products he desires is much better fitted to his needs than the quality of the products that the adult desires for him.

VIII

CLOTH

Why do children begin at once to use cloth for a definite purpose and spend some time in getting acquainted with other materials? A two-year-old baby was observed taking towels from the racks and carefully wrapping her dolls. The same baby, given clay, simply poked it and rolled it. Children have many early experiences with cloth, while their experience with other materials is comparatively meagre. When the child comes to kindergarten, he finds some strange materials with which he must become acquainted; but he has had many experiences with cloth before. He knows many of its possibilities. He has observed many of its uses. He knows that it is more substantial than paper. He recognizes various weights and textures, not as a classification of textiles but as materials from which his clothes are made for summer and winter, and as materials from which other articles are made, such as towels, table-linen, curtains, and bed-linen. He is not conscious that he knows different kinds of cloth, but, if the cloth is shown to him, he says it looks like curtain goods, or overcoat goods, or sheets, or dresses.

It is not at all surprising, then, that kindergarten children in their first experience with cloth do not wrinkle or cut it aimlessly, but that they at once attempt to make some kind of clothes.

Sewing Not Essential at First.—The first use of cloth does not necessarily involve sewing. Sewing is a means of fasten-

ing cloth together, and, while it is undoubtedly in most cases the best way, it is not the only way nor the first natural process. Often the first need for cloth arises when the child makes marbles and needs some way to carry them. He may attempt to sew a bag, but he is very likely simply to tie the marbles in a piece of cloth. He may feel that his doll needs clothes and may recognize that cloth is the best material to use, but the first doll dress does not always necessitate sewing. The most direct and natural way of clothing the doll is to wrap it in the cloth. But the child who so dresses his doll or the child who ties his marbles in a cloth soon discovers that it is a very unsatisfactory way to keep them, and if the materials are at hand, he will very likely attempt to sew a bag; or, dissatisfied with the doll's makeshift dress, he will try to sew a dress. All of the children have had more or less experience in seeing the sewing process. Otherwise there would be no reason to expect little children to begin to sew. However, in consideration of their former experience, the presence of sewing materials will solve their problems as a means of making better bags for the marbles or better clothes for the doll.

Materials.—Cloth which is to be used by small children should be substantial, but not so heavy as to make sewing difficult. Thin unbleached muslin, heavy linen, Japanese crepe, and gingham are good. Scrim, voile, and thin, "stretchy" materials are hard to work with because they so easily pull out of shape. Heavy, closely woven materials of a hard weave, as gabardine, duck, and denim, are not good, because they are hard to sew.

Needles should be coarse, with large eyes. Thread should be coarse. Wherever there is any difficulty, needles should be threaded for the children.

Shortness of Second Stage.—Since sewing is a very utilitarian process the articles the children will make will be things they wish to use. Using an article very soon determines its weak points and thus makes for improvement. This tends to shorten the second stage, where children work without any consideration of technique. Therefore, in a shorter time than with other materials the children develop into the third stage, making things to be recognized by other people and working for improved technique.

Third Stage, Improvement in Technique.—Again, as in the case of articles made of clay or of wood, the basis or standard for criticism is utility. The first sewing is obviously for the purpose of holding two pieces of cloth together. The first test is not whether the stitches are even or the seams straight but: Does it hold together? Will the bag hold the marbles? If the stitches are so large that the marbles fall out, the sewing is unsatisfactory, and in attempting to correct the mistake the child is growing in his handling of the material.

Seam.—With the sewing of his first seam the child sees the necessity for having the thread fastened at both ends. Therefore, to knot the thread before beginning, and to fasten the thread by taking several stitches in the same place at the end, will be among the first things the child must be shown how to do. If the child has difficulty in knotting the thread, it should be done for him, as both knotting the thread and threading the needle are intricate processes, requiring close muscular co-ordination.

Evolving the Hem.—After the sewing of a straight seam to hold the cloth together, the next process needed is hemming. The hem should develop as a solution to the problem of rav-

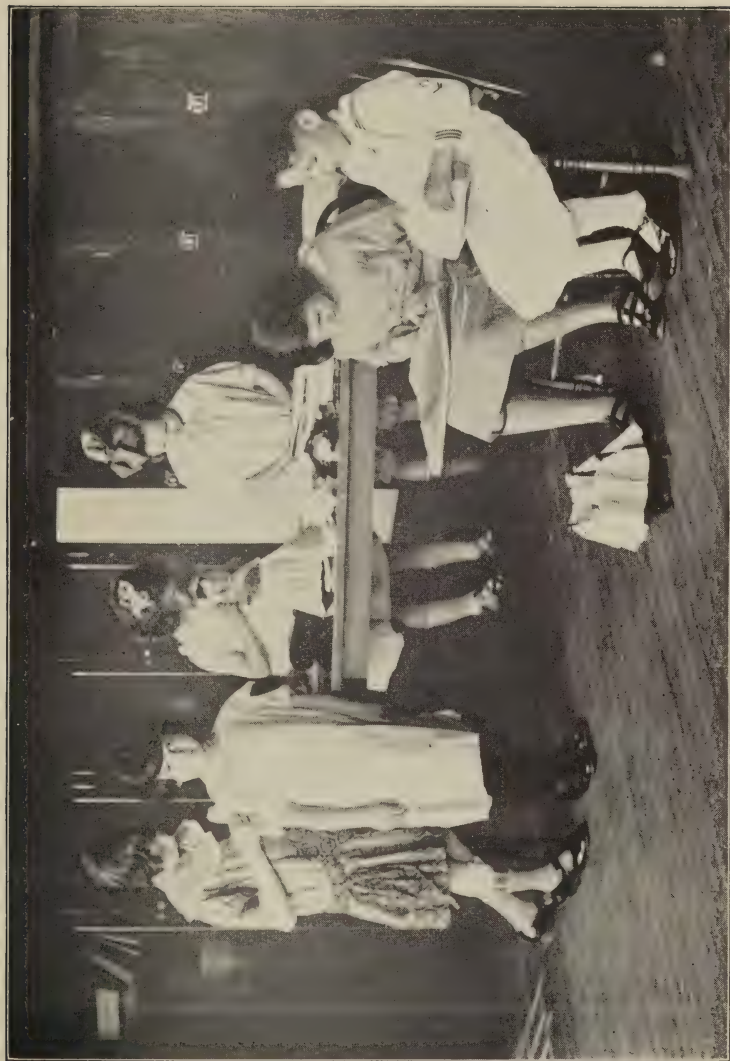


PLATE V. "Children make from cloth articles for themselves and for their dolls."

elled edges. To turn up the edge once and sew would take care of this. The raw edge on the wrong side should be another step. It may not be necessary for every child to pass through the stages of making an article without a hem, and then one with a hem of one fold, and then one with a hem of two folds, but one or two children should; then the group may discuss the problems involved and thus arrive at the solution—the hem.

The Use of the Pattern.—The pattern undoubtedly has an early place in the child's work with cloth. It is not fair to the child to establish such ideas of materials as would permit him to cut ruthlessly and thoughtlessly into cloth and come back for more when he finds he has cut too small. However, the pattern originally came from an attempt to experiment with a more plentiful material in order to save the rarer materials. Before the pattern came into existence, cloth was ruined. This gave a definite need for experimenting with cheaper material. This does not mean that every child in the class must ruin a piece of cloth before he sees the necessity for a pattern, but if one child cuts a dress too small, and the members of the sewing group talk it over and with the teacher's help decide upon a way that future misfortune may be avoided, the place of patterns will have been definitely established. The use of patterns before a need for them is clearly felt establishes a perplexing form in sewing that is followed only when the child is carefully supervised.

Use of Pattern in Exchange of Ideas.—In real life patterns are used to make possible exchange of ideas as well as for economy of cloth. This use of patterns should also be established in the kindergarten. An attitude of passing on discoveries and new ideas can be started in the exchange of pat-

terns which the children make. It is very interesting to watch the growth of an idea as it is taken up by one child after another, each adding his individual touch though attempting to copy.

It is a mistake not to allow the child ample freedom. He often creates added problems for himself, the solution of which gives valuable training. It is only in this way that the child will develop a sense of individual responsibility. The individual problems encourage accuracy and the desirable attitude of planning ahead.

Most children can bring clean cloth from discarded clothing from home. Old sheets afford large pieces of cloth which can be used to advantage. If the material is new and limited in amount, the children will see added necessity for careful planning and cutting.

Decoration.—Children like to add decoration to their sewing. Anything small or complicated should be avoided. Yarn may be used in simple stitches. Paint may be used in stencils or in block prints to form borders or units. Cloth may be appliquéd in units large enough to avoid intricate work.

Things Children Make from Cloth.—Children make from cloth articles for themselves and for their dolls. They make dolls from muslin, old stockings, underwear, Turkish towel-ling, using cotton for stuffing. Accessories and clothes are made from corresponding “real life” materials. It is always well to encourage making things for the child’s own use. It provides opportunity for discovering mistakes through actual use, and it also encourages larger work than is possible in making doll clothes. The need for aprons in the kindergarten work provides one of the first opportunities for sewing. Chil-

dren also make napkins and lunch sets for the tables as well as costumes for various occasions. Children will often attempt and carry out successfully things apparently quite impossible. One little girl in the kindergarten, on completing an apron for herself and a dress for her doll, remarked that she believed she would make herself a dress. She cut it out, made it, and wore it.

Children progress at different paces. It is therefore impossible to keep the class together without sacrificing some of the abler children. The standard by which we measure a teacher's ability should not be how well a child does at any particular moment, but the extent of his growth from time to time.

Provisions for Growth.—How can we provide for the physical, mental, and social growth of little children through the use of cloth? Proper conditions for physical growth can be provided by discouraging intricate work and by promoting the children's natural joy in their work. In providing for the essential condition of happiness the teacher should realize that happiness is promoted by helping the child to recognize and solve the problems he meets in his work. The solving of such problems provides conditions that make for mental growth. Opportunity for developing the desired social habits is afforded through exchange of ideas during the process of sewing and in the discussion of work afterward.

The value of adapting a process to the needs of children is nowhere more clearly shown than in the use of cloth in sewing. A generation ago children's experiences in sewing were limited to articles purposed by "grown-ups" and sewed with "grown-up" stitches. As a result of this experience children hated sewing and hesitated to make new things from

cloth. Observation of children in a modern kindergarten or primary school, where the child purposes his own activities and carries them out in a way adapted to his stage of development, shows that he not only enjoys sewing but undertakes without hesitation to make anything he needs.

IX

ROVING

Roving does not afford so many possibilities for expression as some of the other materials. It best lends itself to rope-making and weaving. A variety of colors should be available for use.

The children use rope for dividing their room, for jumping, for use in construction, and for horse-reins. The rope may be made from roving. Strands may be twisted together, braided, or tied in knots. Jumping-ropes should be weighted by knotting in the centre to be heavy enough to turn; clothes-pins may be attached to the ends for handles.

Weaving.—Children are interested in the processes of weaving. The small yarn weaving is too intricate, but weaving with roving on simple looms is large enough to afford use of the larger muscles. The greatest difficulty in kindergarten weaving is that weaving large enough for children involves more time than their short span of attention will permit. In the traditional kindergarten of the past weaving occupied an important place. Now it is recognized as an activity belonging to older children.

Large looms can be made from wood. Nails driven at the ends hold the warp. The nails should not be placed too close together, as the weaving then becomes too tedious. The children may weave small mats for themselves to sit on. Later they make a large loom, and the whole group may work on a larger rug. Roving may be used for the woof,

or old sheets and pillow-cases may be brought from home, dyed with cold-water dyes, torn into strips, and used for the woof.

If there is interest, weaving is a good activity for little children. However, there is little doubt but that in the past its value has been very much overestimated. It won its merits when any legitimate activity was welcomed as a reaction to the forced attitude of quiet "schoolroom" behavior. It was a clean, neat-looking activity that did not too much upset the perfect order of the classroom, and the children welcomed it as a relief from forced inactivity rather than from love of the activity itself. Judging it in the light of modern conceptions of the needs of little children, we find that weaving material does not lend itself particularly well as a means of expression for them; it does not provide many problems for solution, nor does it allow sufficient bodily activity. Weaving has its place in the activities of little children as the beginning of an industrial process, but is not as valuable an activity as is painting, clay-modelling, wood-working, or sewing.

X

PAINT

One morning the children in the kindergarten found in their room for the first time an easel, brushes, and paints ready to use, and were told that they could paint whenever they wished. Bobby was the first child to use these wonderful new things. Without comment we watched his procedure. A great blotch of red paint near the centre of the paper, and around it similar spots of yellow, green, and blue, was Bobby's rather neat contribution. Jane, attracted by the bright color he was using, followed him. She was more swift and less orderly in her experiment. A dash of green, another of red, and still another of yellow, each running into the other, was the result. She was driven away by William, eager to try his hand. William covered the paper quickly with crude stripes of all the colors, and then added confusion to confusion by painting over it all a dashing coat of yellow. The other children took their turns at the easel, but no two produced anything similar, and no one produced anything resembling a known shape.

Is this the normal reaction of children to paint? What is the interpretation of such a reaction? What is its significance? What ought a teacher to do about it?

Manipulative Stage.—In order to determine the normal reaction to a new drawing medium, we gave children media that they had never seen before. With the pencil they made marks and then became intensely interested in the "path"

that followed the pencil through a complicated network of scribbles. With crayon they made similar entanglements of lines, using all their colors. With charcoal indefinable smears, with water-color meaningless daubs, resulted. Through this series of experiments with different media we discovered that the reactions to all new drawing media are similar. The children first get acquainted with the medium; their interest is in the activity—the manipulative stage.

Symbolic Stage.—The manipulative stage is essentially the beginning process in the use of any medium, yet it is important only as it leads on to expression through use of the medium. So, after the children had spent several days exploring the new medium, they were asked what they were painting. Bobby's picture looked like meaningless daubs. Bobby pointed out the houses, the street-car, the trolley, and the "stocking" in front of the barber-shop.

Other remarkable interpretations were given to equally chaotic compositions. Jane made a blue page with four circles of yellow, and explained that there were four children playing in the water at the beach. John said he had painted a giant in a castle, and pointed out the windows and towers. William, when asked to tell what he was painting, explained his intangible masses of color: "I am painting a lovely, lovely day, and these are shadows over the whole world." Dick's picture showed remarkable color interpretation. He had painted a small spot of red. Above it was a large spot of yellow; above the yellow across the top of the paper was black; down the sides of the paper were streaks of black, and across the bottom of the paper was green. On being asked to explain his picture, Dick beamed. He came to the easel, pointed to the red spot, and said: "This is the house, and this



PLATE VI. "The drawing materials that best satisfy the child's needs for expression are the easel, large brushes, large sheets of paper, and plenty of accessible paint."

is the up-stairs [yellow]; this is the sky [black], and the rain coming down [black streaks at side], and this is the grass [green].”

What is the meaning of these illegible pictures? The “barber-shop,” “the children in swimming,” “the giant in the castle,” “the house”—all showed definite feeling. The children reflected the feeling as they enthusiastically explained the pictures. But the pictures were without conventional form. The children had expressed their ideas by means of crude signs for the things signified. They saw in their paintings the reflections of their experiences, and were satisfied to interpret the mysterious signs which were “Greek” to the uninitiated. The teacher recognized the symbolic stage—“symbolism serves as a sign, not as a conveyance.”

Handling Symbolic Stage.—What is the value of this kind of expression? “It serves to stimulate, to vivify; its main value is reactive, freeing the child and giving him help upon his own imagery. It must at first be judged from this standpoint, its liberating power.” So Bobby was encouraged to paint more pictures telling new things rather than to make a better house and better street-cars in the picture he had made. In the class discussion at this time no comment was made on how well a thing was drawn, but emphasis was placed upon ideas expressed. Everything was done to encourage the characteristic spontaneity of expression. The remarks included nothing that would tend to destroy the wholesome confidence that makes the child have no hesitancy in attempting to draw anything at all that is involved in the idea he is expressing. The discussion first gave the children an opportunity to explain their pictures; second, it encouraged the children to look for new things that had not been done be-

fore; third, it left the children with further ideas and eager to express them.

Many teachers, in their attempt to get children really to tell something when they draw, make the mistake of insisting that a child first plan a picture and tell what he is going to paint, and how he is going to paint it, before he begins to work. A child starts with an idea to express. As he draws, the idea grows. His drawing is a help to thinking. To insist that he tell every detail of his picture before he begins to draw will limit his ideas, which ought to grow as he works.

The aim at this time is to make every part of the picture significant. The test for growth is not how well the child has expressed his ideas, but how many ideas he has had, and how readily he has expressed them. "Once the child's imagery is loosened, then does his expression become easy, become a delight, become varied." The "loosening of imagery" must precede free expression. During the symbolic stage the child is unhampered by the limitations of technique.

It is at this time that the special art teacher, who does not understand the importance of recognizing this stage, is apt to retard the child's development. She sees only poor drawing in his picture, and insists on his learning how to draw certain objects. If he recognizes the improvement over his drawings he is satisfied only with drawing the things he has been taught. If he does not care for her suggestions, he becomes irritated at her persistence in having him express the drawing teacher's ideas in her way. In the former case his expression is limited to the things he has learned to draw instead of using the entire field of his experience. In the latter case he may become disgusted and give up drawing entirely. It is the advantageous time as well as the normal time to build

up habits of free expression. His drawing field is as wide as his life. He readily draws anything that he has experienced without the handicap of "how to do it."

Realistic Stage.—Where do these expressions lead? "As soon as the child has acquired the habit of vivifying and liberating his image through expression, then a return may take place to original form." Bobby no longer uses symbols for objects to help him to relive experiences, but he uses representations of the forms themselves to serve as a conveyance in telling that experience to some one else. If he wishes to tell what he did during his vacation he now paints a boat that resembles a real boat in form. By means of his picture he conveys the mode of Indian warfare.

When "symbolism serves as a sign," technique hampers expression. But when there is a return to "original form," technique encourages expression. Bobby wants to make trains that look like trains. Jane wants to know what a trundle-bed looks like. William says his picture is no good, because his paint "ran down." The children are unable satisfactorily to express their ideas. In order to continue to grow in self-expression they must have help in "how to do it," or technique.

This desire on the part of the children to return to original form does not indicate that they should be given models from which to draw. Children leave the symbolic stage gradually. To see an attempt to get little children to draw from a model is rather startling. The model serves only to suggest associations to them. Instead of a simple drawing of the apple placed before them as a model, their papers may show fruit-stands, orchards, and other intricate representations of more remote associations.

The drawings of the children indicate the child's thinking process. Since he does not draw from models, he is unhampered by what he can see from any one point of view and proceeds to put down on paper the different associations as they are grouped about one idea. He draws his schoolroom, the playground outside, the slide, and at the bottom of the page the rings in the gymnasium. The teacher recognizes a unit in thought in this picture, even though it is impossible to recognize unity in expression.

Help in Technique.—The drawing seems hopelessly crude to the adult. The child's standards for judgment are not the same as the adult's. Some mistakes should be ignored until the child in his development is able to grasp them. For instance, little children may not be able to see that one side of a house is dark in shadow, and the other light in sunlight. However, they can see that the house is too small for the flowers that surround it.

The return to original form is first through observance of the large underlying realisms. The largest mistakes in proportion, proportion between objects, are first to be noticed. Improvement should be made through comparison to real life: "Could the man walk into the house?" "Is the automobile too large to be driven into the garage?" Thus the child is led to get better relative proportion in his pictures. Later, children will wish better proportion in individual objects. The street-car must be "shaped like" a street-car, the office building tall and slender as well as towering above the street-car.

The most evident mistake in perspective concerns showing earth and sky in the distance. Young children in showing landscapes paint a strip of blue at the top of the paper for sky, and brown or green at the bottom for ground, and leave

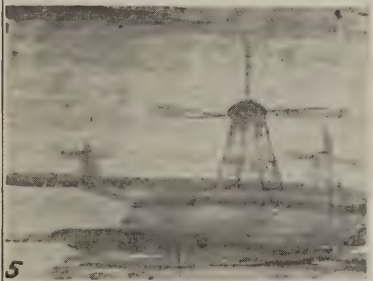
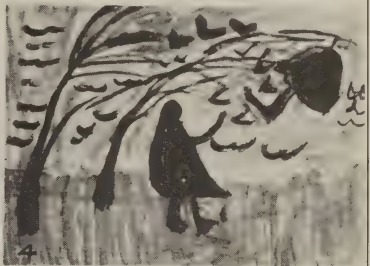
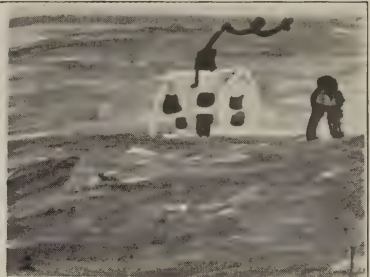
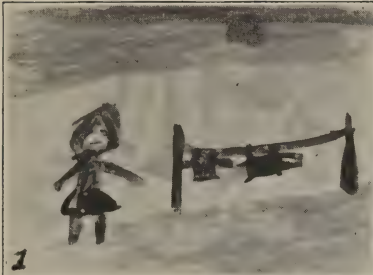
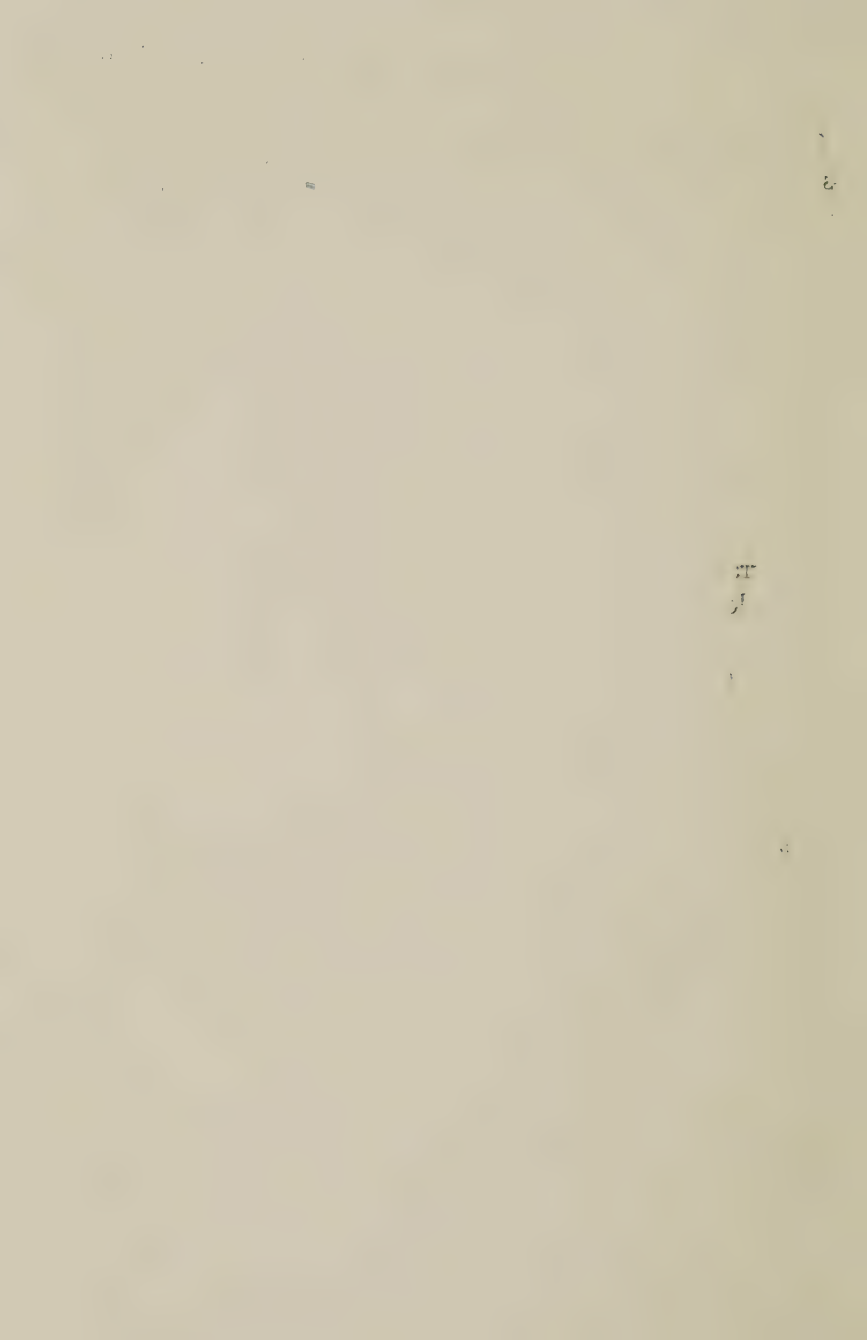


PLATE VII. Children's drawings showing improvement in use of principles of perspective.

1. Earth and sky do not meet.
2. Earth and sky meet, but objects are placed on horizon.
3. Objects are distributed in foreground but do not reach up into sky.
4. Objects reach up into sky but do not show distance.
5. Objects made smaller to show distance.
6. Objects made smaller and placed higher on paper to show distance.



"air space" between; later on, observation of sky-lines will show them that the earth and sky seem to meet. They next discover that objects in landscape are not lined up on the sky-line as their pictures show, but are placed on the ground from foreground to horizon. Still later, children see that trees and houses reach up into the sky far above the sky-line. Children then wish to show a house far away in the distance, and discover that objects far away appear smaller. Afterward they also discover that objects far away are higher on the paper. One must constantly bear in mind that this process of growth is gradual. The average child in kindergarten has slight interest in technique, and he may reach the second or third grade before he uses these principles which seem easy to develop.

Better composition can be encouraged by suggesting giving "room enough" where there is a tendency to crowd, and putting something on each side to keep the picture from upsetting where there is a lack of balance.

Special Problems in Encouraging Expression.—Unusual responses from some of the children showed great limitation in ideas. One child was given paints and painted a Christmas-tree. Later the same child painted a Christmas-tree and refused to paint anything else. The drawing teacher insisted that he had no imagination and was a failure as far as drawing was concerned. Investigation showed that he had been given paints in the kindergarten and had been taught by formal steps to paint a tree. He continued to paint trees, having been given the idea that he could do nothing with paints without first being told how to do it. It is quite likely that this illustration is typical of a large group of cases. The best way to deal with these cases proved to be to make no attempt

to skip over the manipulative stage, but to encourage the child to tell a great variety of experiences, the teacher giving him a start by suggesting something that is related to what he is fond of doing. The idea told in his drawings may be discussed, but no comment on technique should be made until the child feels that he can draw anything without being told how to do each step. In the case of the boy who painted Christmas-trees, his teacher asked about the Christmas-tree as it grew. He became interested in showing how the tree looked when he saw it growing in the country. A landscape resulted, which led to painting other things that he had seen in the country.

Too much attention to technique is also limiting to self-expression. A second grade teacher gave a series of principles in landscape perspective, such as "earth and sky meet," and "distant objects are smaller." The children became more interested in how they were painting than they were attentive to what they were painting. Their help in technique was given before they felt the need for it. As a result their pictures showed the application of the principles, but ideas were lacking. The children in looking at them commented first and emphatically on the consistency of sizes of parts of the picture, and paid little or no attention to what idea was being expressed. "A mode of expression separated from something to express is empty and artificial, is barren and benumbing." The teacher saw that their powers of expression were being paralyzed, and diverted them from too much attention to technique to wholesome interest in telling something. As a result several weeks later every child in the class was painting pictures that told interesting and individual experiences.

Use of Picture Poems.—When there is difficulty in getting children started to tell things in paint, “picture poems” may be used (poems that contain suggestions of pictures that the children can imagine). Stevenson’s “Rain Poem” is good. “It rains on the umbrellas and on the ships at sea” is hard to resist by even the most unimaginative child. Nursery rhymes and fairy tales give good material for suggestions. It is, however, still better to encourage the children to draw things in their own experience, their homes, coming to school, or the snow. This gives opportunity for direct expression of the child’s own experience.

There is also much stimulation to expression in seeing what others have done. However, skill must be used in showing pictures to children to prevent encouragement of imitation rather than individual expression. Children’s paintings which were rich in ideas were collected and shown to groups who seemed to have nothing to “tell.” The children were asked to look for the meaning in the picture. After they had seen and enjoyed the paintings they were asked what they would like to tell in pictures. The variety of ideas in the pictures shown had suggested many different ideas to the children. This interchange of ideas resulted in much liberation of expression.

Color.—Among other evident mistakes that the child makes in drawing are mistakes in color. The teacher is not sure what should be done about the red trees, purple grass, and green skies that appear. The understanding of the development of the color sense solves the problem for us. From his responses we are led to believe that at first a baby sees only light and dark; later his responses show that he sees color; still later he is able to discriminate between tints, shades,

and intensities. Experiments show that through color experiences the color sense is developed; and an individual working with color later sees color in objects that formerly he saw as gray. The small child is fond of the brightest and most intense colors. It is commonly supposed that, due to the "savage" stage, little children crave pure color. They do not necessarily crave such raw color, but since their color sense is less developed they require more intense color as a stimulus. To insist on children working for correct color is wrong, because their color sense is not developed. They should be given intense color to work with, and much color experience in order to develop the color sense, but references to mistakes in color should be avoided until their color sense is better developed.

Materials.—Does the use of paints provide for developing the desired social habits and also for mental and physical growth? In the use of these materials children learn to use freedom and to respect the rights of others. They learn to give and take constructive criticism as well as to use initiative.

A medium to satisfy the physical and mental needs of children must also provide for large, rapid work and joy in activity. Such requirements are met by an equipment of large brushes, large sheets of paper, and plenty of accessible paint. Standing at an easel, painting on large pieces of paper, brings into use the large muscles. Plenty of paint and large brushes provide for immediate expression essential in consideration of the child's short span of attention. The children have rich color experiences. There is a joy in activity which promotes the desirable attitude of happiness in occupation.

Paper.—The paper most practical for use is unprinted news-paper. It comes in sheets 24 inches by 36 inches, and should be ordered cut 24 inches by 18 inches. This paper is best because it is cheapest and makes it possible for the children to have plenty. Children need quantity rather than quality of paper.

Brushes.—The brushes should be large camel's-hair water-color wash brushes. The large brush will encourage painting, since large surfaces can be quickly covered.

Paint.—Tempera or show-card colors are adapted to this use, but are expensive. It is much better to buy cold-water fresco paint in powder form and mix it for use. It can be purchased by the pound at prices ranging from ten to thirty-five cents, according to the color. In buying cold-water paint avoid the tints of color that are prepared for wall use. The colors should be pure colors of the principal hues: red, orange, yellow, green, blue, violet, and dark brown.

Mixing the Paint.—The paint should be about the consistency of cream. Stir the powder and a little water together until lumps are removed. Add water until the paint is the right consistency. The pigment settles to the bottom. A little stick should be provided for each jar of paint in order that the paint may be stirred and kept well mixed as it is used. Tongue depressors used by the medical department of the school can be purchased at any drug-store and make good "paint mixers."

The Easel.—The easel should be substantial and of the right height for the children. The board should be attached firmly to the upright pieces and not rest loosely on the frame, as in the construction of easels used in art schools. The drawing-board should be on the eye level of the child as he stands.

A very satisfactory easel can be made by the manual-training department at a reasonable cost. Thumb-tacks will hold several pieces of paper in place. The paper can be turned back as it is used. The easel should be placed near a window with the light from the left. At the right of the easel a small table should be placed to hold the cans of paint. The floor should be protected with a square of linoleum. If linoleum is not available, news-paper can be used. The jars for holding the paint should be air-tight. Pint mason-jars or mayonnaise-jars with screw tops are good. The children bring them from home.

Care and Handling of Brushes.—Each brush should be marked with one of the colors and always used in that color. Even though the brushes are washed every day, the paint may be grayed by using the red brush in the green paint. A convenient way to mark the brushes is to use the cold-water paint. Paint a stripe of color around the handle, and when it dries cover with shellac. The brushes should be washed, rolled to a point, and allowed to dry with bristles straight. Children should learn to take proper care of their own equipment.

As soon as the child has had an opportunity to try the materials, handling the brush should be given some consideration. The brush should be held loosely between the thumb and first finger, and controlled by muscles of the arm and not the fingers. In case the child persists in grasping the brush in the whole hand it is best to let him continue; with more practice he will progress to the more advanced stage of holding the brush.

Habits in Use of Paint.—The children in one group discovered that certain ways of using the materials gave better

results. With the teacher they worked out certain habits that they observed in using paint.

- (1) They recognized an "aristocracy" in brushes and that paint-brushes did not do their best work when they were treated like scrub-brushes. Put the paint on with direct strokes, do not scrub.
- (2) In order that the paint may not run down on the paper, wipe the brush on the side of the paint-can to remove excess paint.
- (3) Always put the brush in the right color of paint.
- (4) Stir paint.
- (5) Wash brush and roll to point. Do not leave in water overnight.

The children also used the same care in protecting their clothes and the floor that they had used while working with other materials.

Provision for Additional Drawing.—For a large group one easel does not provide sufficient opportunity for drawing. Children may have additional chance to draw through use of the blackboard, and also with large marking crayon, using sets of colors—red, orange, yellow, green, blue, and violet—and large manila paper.

As soon as children begin to work for improvement in technique they will need references to see how things look and see how "other artists" have done the thing they are doing. To provide for this the children should be encouraged to collect pictures and build up a library of form. This is used not as a source for ideas, but as an "encyclopædia" to which children can go for information to help them tell their story more truthfully.

As they grew in thought and expression, "Bobby and Jane and William" wished to show more detail in their drawings than was possible with the use of the large brushes only. Through early use of a drawing medium for large quick work, they were ready for the use of a medium for more intricate work. Through early use of drawing to express their own ideas, they were accustomed to the use of drawing as a tool. New media and technique were added to meet new needs, but through the "exercise of the art instinct," through use of materials that fitted their needs, and through procedure adapted to their development they were equipped with an adequate means of expression.

XI

BY-PRODUCTS

Kinds.—William came to school one afternoon bringing a hat-box. He said that his mother gave it to him and that he wanted to make a “merry-go-round” out of it. His teacher wisely made use of the incident to increase her limited supply of construction materials. She encouraged children to collect materials from which they could make things. She mimeographed a letter and sent it home with each child. In the letter she asked the mothers to save “by-products,” and explained that by the term “by-products” she meant any kind of clean waste products that might be used by the children for construction. She included a list of suggestions: boxes of all kinds—candy-boxes, hat-boxes, suit-boxes, match-boxes, pill-boxes, round oatmeal-boxes, egg-boxes, gas-mantle boxes; coffee-cans, collar-buttons, corks, spools, milk-bottle tops, clothes-pins, sponges, buttons, string, wire, tinfoil, cloth, hat-rests, ribbon-blocks, wallpaper, a newspaper, and berry-crates.

Opportunity for Social Growth.—A cupboard was provided which was accessible to the children. The children made it their “base for supplies.” They brought material when they discovered it. They both contributed to and drew from the common fund of supplies. This helped develop the desirable “civic interest” in providing for the group.

The experiment showed that the use of by-products provides for two life situations:

- (1) Here is material—what can be made from it?
- (2) Here is a need—what can satisfy it?

By-products cannot be considered a distinct material with a special technique, because they are made from many "raw materials," pasteboard, wood, or metal. However, their use enables children to make things more quickly than they could make them from "raw materials," and are, therefore, well adapted to the child's short span of interest. The use of by-products also provides excellent opportunities for problems, finding and testing solutions.

Mental Growth.—In consideration of the valuable opportunities for growth the teacher welcomes the child's activities. She wisely does not assume responsibility for what the child is making. She is there as a "consulting engineer" if he becomes discouraged from difficulties. The help that is given him is in the form of assisting him to see his problem more clearly and, by means of questions, directing his thinking toward a solution.

A boy in the first grade brought in a box from which he said he wanted to make a dog-cart. As he worked he encountered many difficulties which he had not anticipated. Several children made suggestions as to how he could fasten the sides together. He listened and chose his way. When he came to the wheels, his teacher helped him, not by telling him what to use for wheels and how to fasten them on, but by asking "what wheels are for and what they must do," thus concentrating his problem. He decided that the wheels must turn, and that they must be round. Then he looked for something to use. He found can-lids, which answered very well. Other children offered suggestions for fastening the wheels on. He decided to use paper-fasteners, which he later discarded for a wooden axle and nails.

Basis for Improvement.—Usableness is the basis for judg-

ment and the test for all improvement, and also is a standard which the child understands. A class discussion should include opportunity for the children to comment on the work and to suggest means of improvement. They will pick out the good tables and tell why they are good, and will also decide that a table is shaky and needs to be made stronger, and will suggest ways of making it so; the shaky table is not a usable one.

The play instinct directs much work. One group in kindergarten made a boat from blocks, filled the boat with dolls made from paper, then decided to make a landing and surround it with an amusement park, all of which provided many problems for solution and opportunity for manipulation of material.

Any work in which there is danger of injury, due to lack of muscular control, should be done for the child.

If the children desire more finish in the products, they may paint them with cold-water paint, such as they use at the easel.

The making of dolls and doll houses and furniture makes up a large group of uses of by-products. Children make dolls from news-paper, folding a strip for the body, another for the arms, and fastening with a paper-fastener. They also make such dolls from paper napkins, rolled, doubled together and tied for the head; and from paper bags, twigs, grape-vines, flowers, corn-husks, clothes-pins, gloves, stockings, socks, balls, bottles, and cloth. Raggedy Ann dolls made from cloth are popular with the children, and are enjoyed more than the expensive mechanical dolls. The children take great interest in clothing the dolls they make and surrounding them with all the "comforts of life."

The variety of materials that are available in by-products encourages versatility in use and offers occupation which can be carried on outside the school. The use of by-products will encourage self-directed activity, and will be a help to the teacher who has difficulty in getting away from the formal, dictated method of using materials. As in all primary work, the adult's standards and the teacher's desire to show clever and spectacular work must be sacrificed for the growth which is indicated in the results of the child's own interests and efforts.

XII

ART APPRECIATION

Appreciation of Art Limited to Children's Interests.—In a primary class a lesson in Art Appreciation was being given. It was about a picture, the "Sistine Madonna." The teacher told the children about Raphael and why he painted the picture, and pointed out the figures by name—the Madonna and Child, St. Sixtus, St. Barbara, and the Cherubs. After the lesson we asked: "Why did you choose the 'Sistine Madonna'?" "Because it is one of the world's masterpieces. Every year we teach the children four of the masterpieces." "Do you think they could appreciate the significance of the picture?" "Not now, but they will know about it when they are old enough to appreciate it." "What are the children reading?" "Oh, little simple stories about children and animals." "Why don't you read them 'The Idylls of the King'?" "They wouldn't understand it; they will read that when they are older. We aim to give them the reading habit. Their reading follows their abilities and interests."

The incident is typical of the popular conception of Art Appreciation. The child is treated as a blank catalogue in which we would indelibly inscribe such productions as the world has termed masterpieces. Thus he has his knowledge stored away, "issuable on demand." Does this provide for growth? By this procedure his field of appreciation is limited to the number of pictures "studied," and is bounded on all sides by art of every kind, to which he feels he must remain a stranger because he "has never studied it."

Children can be led to have the habit of "reading pictures" as well as reading stories. As their experiences grow, their field for understanding the expressions of others about similar experiences will broaden.

Field of Appreciation not Limited to Pictures.—What should we choose for our Art Appreciation lesson with primary children? Pictures and sculpture, all would agree; but why limit the field of appreciation to pictures and sculpture, when it is as wide as life itself? Anything that is beautiful and that falls within the range of the child's experience is worthy of consideration. If the children are making bowls, a piece of pottery; if weaving rugs, an Indian rug; if making furniture, a hand-made article of wood will find response in appreciation of the "expressions of others."

Basis of Selection is Children's Experiences and Interests.—The children's interests and experiences, then, will determine our selections. When children first come to school their experiences have been centred in home life. They are interested in pictures of babies and little children; they especially delight in Jessie Willcox Smith's "Mother Goose" pictures. During the home-life project the children are interested in pictures of activities of home life such as Millet's "Feeding the Birds," "The First Step," "Woman Churning," or "Can't You Talk?" by Holmes, or "Supper," by Fesberry. Later, children become interested in home life of other lands. The Indian project suggests pictures of Indian life: "The Indian Hunter," "Indian Shepherd," "Voice of the Falls," by Irving Couse; "Picture Writing," by Frederic Remington. Sculpture: "Black Hawk," by Lorado Taft; "Appeal to the Great Spirit," by Cyrus Dallin; Indian pottery and rugs. Dutch life suggests "Tulip Time," by George Hitchcock;

"Little Dutch Maid" and "The Baby," by Charles Woodbury. Children naturally express their experiences, and enjoy seeing those experiences expressed by others.

Desired Growth in Appreciation.—It is obvious, then, that ability to appreciate should develop with experience. When we show children Indian pottery we wish them to appreciate the beauty of its craftsmanship, but we also want it to lead to appreciation of other craftsmanship. We wish to add "Tulip Time" to their picture acquaintances, but we also wish the knowing of that picture to lead on to other pictures.

How to Provide for Growth in Appreciation.—How can we provide for this growth? "Art is not an outer product nor an outer behavior. It is an attitude of spirit, a state of mind, one which demands for its satisfaction and fulfilling a shaping of matter to new and more significant form." * Our first provision for growth, then, would be in making the child feel that a work of art is vitally a human expression. One must feel the need (the state of mind) and the process (a shaping of matter to new and more significant form) as antecedents to the material expression.

How may we create such a feeling? The following lesson was worked out with second-grade children with this aim in view: As the children were studying Holland, "The Landscape with the Mill," by Ruysdael, was presented. Each child was supplied with a copy. First, the children looked at the picture and "read" what the picture told them. They thought out a title and decided that the picture was painted in Holland. It was suggested to them that, were the artist to speak to them in his native language, they could not un-

* Dewey, John, "Culture and Industry in Education," *Teachers College Bulletin*, March 1, 1919.

derstand him, but in using a picture as a means of telling his story he could tell them much about Holland.

Then the children were given the artist's title and the artist's name, and were asked: "Why, do you suppose, did he paint this picture?" Through discussion the children decided it was because he loved Holland and wanted to tell people about it. The children disagreed with one boy who thought he painted the picture to show what a good artist he was.

As a means of helping the children to get the feeling that prompted the painting of the picture, they were asked whether they had ever seen anything they wanted to paint. Yes, they had: "a train at night," "my pony," "the fire-engine," "my aunt's farm." Then they tried to imagine Ruysdael's love of this familiar Holland scene. All information about the picture was given from this view-point: how the artist loved Holland, and how he loved to paint, and how, therefore, he would naturally tell of his country through a picture. Furthermore, as the children had been studying principles of landscape, they noticed that he made the earth and sky meet, and they looked for distant objects to determine why these objects looked so far away.

At the conclusion of the lesson the children realized three points:

- (1) That people tell us things in pictures that we can learn to read, to understand, and to enjoy;
- (2) That the picture is painted because there is some great feeling that the artist wants to express;
- (3) That the children themselves can tell their own feelings.

The technique discussed should be only such as the children have had before. If they have learned about balance, or

rhyming lines, or contrasts of light and dark, they may look for examples in the picture.

Common Approach to All Appreciation.—Any work of art may be approached in the same way. The study of a building may be approached by considering what need caused the construction and how the building has satisfied that need.

As we provide children with materials and technique in order that they may adequately express themselves, so we try to make the work of art live to them as a human feeling, made immortal through exquisite expression.

XIII

BUILDING THE ART CURRICULUM FOR KINDERGARTEN AND LOWER PRIMARY GRADES

Changing conceptions of education are making consequent changes in the curriculum. What changes will a saner conception of art education make in the art curriculum?

Former Conceptions of the Art Curriculum.—Examination of representative art courses* for the lower primary grades shows that our conception of an art curriculum has been that of a list of activities apportioned to certain art periods throughout the year. For example, we find in a State course of study: "December—(1) make and decorate Japanese lanterns; (2) paint lanterns; (3) paint the Christmas-tree; (4) paint the Christmas-stocking; (5) paint a reindeer; (6) paint winter landscape; (7) illustrate Christmas subjects: (*a*) hanging the stockings, (*b*) bringing the Christmas-tree, (*c*) Santa Claus coming, (*d*) Christmas morning." Scattered through such courses we find similarly apportioned subject-matter, such as: "October, first week, teach children the six standard colors. February, second and third weeks, teach vertical. Let two or three children draw vertical lines on the board, to be tested by the teacher with a plumb-line. Make sketches of vertical things. Fourth week, teach horizontal, using similar method."

Generally speaking, then, we are accustomed to think of

* Farnum, Royal Bailey, "Present Status of Drawing and Art in the Elementary and Secondary Schools of the United States," *U. S. Bureau of Education Bulletin*, 1914, no. 13, whole no. 586.

the art curriculum as either a list of things for the child to make or a list of knowledges and skills involved in the art process for the child to acquire. But, "art is not an outer product nor an outer behavior. It is an attitude of spirit, a state of mind—one which demands for its own satisfaction and fulfilling a shaping of matter to new and more significant form." *

Consideration of Art Process a Factor in Making Curriculum.—This conception, that the art curriculum should be based upon a list either of things for children to make or skills for children to acquire, has led us to work backward. The beginning of art is the feeling of need—the desire for expression which is satisfied by means of material, tools, and skills. The product is but the projection or the crystallization of the idea or feeling. If the art work is to be genuine the children must be allowed to follow this natural process—first feeling, then expressing. To assign to the child what he is to make is to make the art work artificial—a mere form. For example, a boy came into school one stormy morning, went to the easel, and painted the picture reproduced in the frontispiece of this book. Here was a genuine art process—the experiencing of the emotion, the satisfaction through expression. A visiting teacher saw the picture, and for her next art lesson had the children make pictures of a little girl in the wind losing her umbrella. Here was an imitation of the art process, without meaning, empty, artificial.

The first and perhaps most important change that must be evident in the art curriculum, then, is the change from listing a series of things for children to make, to planning

* Dewey, John, "Culture and Industry in Education," *Teachers College Bulletin*, 10th series, no. 10.

opportunity for children to develop ability to feel and to express. This does not mean that we cannot anticipate what children will do. Children as well as races reflect themselves, their interests, and their environment in their activities. A rainy day brings pictures of rainy days just as surely as the reindeer that delighted primitive man is recorded in cave drawings. If there is genuine interest in Eskimo life the interest will be evident in the things children do, in what they model, in the pictures they paint.

Consideration of Need for Technique a Factor in Building Curriculum.—Granting the importance of facility in expression, how can we provide for its development in the curriculum? Expression necessitates a medium. The manipulation of that medium constitutes a resistance to expression; one struggles with unwieldy materials in order that the feeling may take form. This resistance may be felt in the lack of an adequate vocabulary or in the lack of ability to construct sentences; it may be felt in lack of skill in handling clay or in inaccurate draftsmanship. Expression becomes unfettered through a growing control over materials as well as through a growing responsiveness to feeling. Many do not recognize this point, but consider that the exercise of the art instinct is provided for when the child is allowed to express his own ideas.

Since control over materials or technique is a means of freeing expression, provision for it must be made in the curriculum. Through repeated attempts to gain satisfactory form the race has accumulated valuable experiences concerning the use of materials. The child has need for these experiences in the art process, just as he needs the accumulated experiences in arithmetic.



PLATE VIII. Pictures showing growth both in unity of ideas and in technique.

1. "Pilgrims and Indians."—Kindergarten.
2. "Santa Claus and a Christmas tree."—Kindergarten.
3. "I washed my doll's clothes."—First grade.
4. "Teeter-totter—we have one at home."—First grade.
5. "Japan."—Second grade.
6. "The steam shovel."—Second grade.

Need for Objectives and Standards.—This accumulated experience or technique consists of certain attitudes, knowledges, habits, and skills. The sequence of these steps in growth on the basis of the child's needs and development has been discussed in detail in preceding chapters. However, in order that each successive year may bring such experiences to the child as will promote real growth in expression, it will be helpful, in addition to providing suitable materials, encouraging responsiveness to feeling, and supplying technique as there is apparent need, to formulate aims and standards which will guide us and prevent floundering in the mass of detail.

Need for Additional Provision for Appreciation.—In providing for growth in expression we must not lose sight of the importance of the development of appreciation. Some appreciation will be established through the child's use of materials. But, since his use of materials is very crude, an appreciation of the work of others developed by comparison to his own use of materials may overawe him to the extent of hindering his expression by emphasizing his own inadequacies. As he grows older and desires better technique his appreciation of a masterpiece may be increased through experiencing some of the artist's problems. For example, one's appreciation of a picture done in water-color is increased after he has attempted to paint in water-color and knows the difficulties of handling that medium. However, to show a picture to a child when he is first attempting to use paint may make him feel that his own efforts are worthless and may discourage further effort. The child's appreciation of the work of others through his own use of materials increases as his experiences increase. For this reason we find in the record of activities and outcomes quoted below fewer attitudes of appreciation

of the work of "grown-ups" established through the child's use of material in the kindergarten, and correspondingly more in the first and second grades.

Shall we wait, then, until the child reaches the upper grades to begin to emphasize appreciation? One cannot observe little children and consent to ignore their genuine enthusiasm about things that interest them. So the appreciations that we hope to establish must be the outgrowth of the child's entire experience and not be limited to his experiences in using materials. To notice a new dress that another child is wearing; to notice a lovely flower-bed and comment on it; to want to pick up papers from the school lawn; to be conscious of pleasure in seeing beautiful color are evidences of a living æsthetic sense. Appreciation as a factor in the curriculum, then, is not adequately provided for as an outgrowth of such activities as are listed below, but must be also established through looking for and enjoying beautiful things that are a real part of the child's entire experience.

Record of Activities and Outcomes a Help in Determining Needs of Group.—A record of activities and outcomes will help to reveal the needs of the group. The method offered below is given not as a model but as an example of how the need was met in a particular situation. With the sequence of development in mind, the groups were carefully observed in order to determine how far each group could progress in the various phases of development in order to promote maximum growth. In making and using these records it is necessary to keep in mind that groups vary because of the factors of experience and native equipment; and to consider the particular groups themselves in anticipating their needs, and that under no circumstances are we to adopt

a plan because it has been successful elsewhere. Also, the individuals whose rates of progress are more rapid or less rapid than those of the other members of their groups must be allowed to proceed at their own rates.

The main objective in the use of materials in this situation was: the liberating of each child's latent powers for freer expression by helping him (1) to recognize the satisfaction of worth-while expression and (2) to gain such control over materials as will facilitate that expression.

Need for Recording Activities and Desirable Outcomes in Relation to These Activities.—In addition to general objectives, definite aims in regard to the use of materials for each grade were determined upon. Standards were formulated as a means of checking in our effort to accomplish those aims. As a guide to supplying technique as it was needed so that "activity might lead on to further activity," the steps in technique (attitudes, knowledges, habits, and skills) were recorded in relation to the activities which revealed the need for that technique. The record was made for the different grades with reference to the materials. For more specific guidance objectives and standards for the use of each material by each grade were decided upon.

KINDERGARTEN

Objective.—To afford opportunity for each child to pass through the manipulative stage in the use of materials and to develop into the next higher level, that of using materials purposefully.

Standard.—Has the child passed through the manipulative stage? Does he use materials for definite purposes?

KINDERGARTEN

CLAY

Objective.—To give each child opportunity to become familiar with clay as a medium and help him to proceed in development so that everything he makes with clay takes on meaning.

Standard.—Is all clay work purposeful? Does the child express a variety of ideas?

Representative Activities

	<i>Attitudes</i>	<i>Knowledgees</i>	<i>Habits</i>	<i>Skills</i>
Manipulating clay, rolling, picking, and pounding.	Feeling of joy in plastic material.	That clay is a plastic material; if it is of right consistency it will hold any impression; will harden and not crumble.	Protecting clothes and table and floor. Working with clay at own place at table.	Modelling from mass instead of sticking pieces together.
Calling round pieces of clay balls, and flat pieces cakes; naming results.	Added satisfaction with realization that things can be made from clay.	That it can be painted when it is dry.	Returning unused clay to jar.	
Deciding in advance what he will make: houses, boats, apples.	Desire to use clay to carry out his own purposes or plans.	That clay holds together when modelled in mass better than when pieces are stuck together.	Protecting work of others as well as own.	
Making gifts: pencil-holders, paper-weights.				

KINDERGARTEN

WOOD

Objective.—To let the child pass normally through the manipulative stage in working with wood—hammering and sawing—and arrive at the place where he intentionally makes things from wood.

Standard.—Has the child found some use for sawing and hammering in order to use wood to satisfy his needs? Do the child's products show a variety of ideas?

*Representative
Activities*

Driving nails.

Sawing.

Making boats, wagons, traffic signs, airplanes, automobiles, fire trucks.

Attitudes

Satisfaction when handling tools, both in muscular activity and in seeing changes in materials through own efforts.

Realization of wide use of wood in every-day life.

Desire to make something from wood.

Knowledge

That wood is a hard, substantial material that cannot be modelled as clay—must be sawed and nailed, but for same reason is more durable than clay.

How to handle tools to avoid injury.

Habits

Care in handling tools—hammer on bench, saw wood in vice.

Staying away from bench when not having turn there.

Skills

Choosing small nail for thin wood (to avoid splitting).

Sawing easily, without twisting or "leaning on" saw.

KINDERGARTEN

CLOTH

Objective.—To enable the child to use cloth and to recognize purpose as a means of determining choice of cloth as medium of expression.

Standard.—Does the child use cloth when there is a real need for cloth? Does he use sewing to satisfy needs?

Representative Activities

Using cloth to tie up marbles or to wrap around dolls.

Making bags, aprons, dresses, hats by sewing.

Making dolls.

Dressing dolls.

Attitudes

Appreciation of cloth as material of many uses.

Realization that sewing is a better means of fastening cloth than wrapping or tying it.

Appreciation of work that satisfies purpose.

Desire to test article to see if it satisfies its purpose: "Will bag hold marbles?"

Knowledge

That cloth as material is more desirable than paper.

That sewing is a means of fastening cloth together.

Habits

Knowing place for materials. Getting out and putting away materials.

Respecting others in use of material.

Skills

Threading needle and knotting thread.

Sewing with stitches that will hold cloth together.

Making things right size to fit.

KINDERGARTEN

PAINT

Objective.—To let each child have experience with painting at easel and to develop ability in using paint as a medium to express ideas.

Standard.—Do drawings have meaning? Does the child express a variety of ideas?

Representative Activities

Daubing color. Making "paths" on the paper with the brush. Using different colors. Making circles or stripes. "Just painting."

Explaining unintelligible drawings.

Attitudes

Joy in painting at easel; in the use of color.

Realization of additional joy in telling something with paint.

Desire to make every part have purpose for being there.

Pleasure in interpreting his pictures.

Knowledge

Possibilities and limitations of paint. That paint must dry before drawing is handled.

Names of color families.

Habits

Protecting clothes with apron, floor with newspaper.

Wiping brush on edge of jar so paint will not run down.

Stirring paint to get bright color. Taking turns at easel.

Using blackboard or 12 x 18 manila paper and large crayons when child wishes to draw and easel is in use.

Caring for brushes: wash, roll to point, and stand in jar to dry.

Skills

Handling paint so that it will not run. In getting clear, bright color by stirring paint and using red brush in red paint, etc.

Painting directly, rather than "scrubbing."

Holding brush properly.

GRADE I

Objective.—To help each child to recognize needs and to use materials to satisfy needs; to consider need in choosing material; to feel necessity for better technique.

Standard.—Does the child recognize needs? Does he use materials readily to satisfy needs? Does he choose suitable materials? Does he judge products in consideration of use?

GRADE I

CLAY

Objective.—To help the child to choose clay when clay is the best material to use and to realize through testing for adequacy the need for better technique.

Standard.—Does the child use clay for things that are best made from clay? Does he judge products to find out whether they satisfy needs?

*Representative
Activities*

<i>Representative Activities</i>	<i>Attitudes</i>	<i>Knowledgees</i>	<i>Habits</i>	<i>Skills</i>
Modelling dishes for the tea-party; animals for circus; vegetables for store.	Desire to make objects with idea of use in mind. Appreciation of ideas and skills of others as well as own work.	That clay is used for satisfying certain needs.	Same as for kindergarten.	Selecting clay when it is best material to use.
Making paper-weights, candlesticks, bowls, pencil-holders, ash-trays for gifts.	Appreciation of balance in desiring that products will not upset.	How to make bowls to hold something. How to flatten bottom of bowl. How to put on handles.	Responsibility for helping to keep clay of right consistency for use.	Satisfying principal function of object in making it: making bowls that will hold something and not tip over; candlesticks that will not upset. Making handles that will hold.
	Appreciation of rhythm in decoration.	How to make surface smooth.		Making clay smooth.
	Appreciation of color in thinking about color chosen.	How to make things so they will not upset.		
	Satisfaction in having things "match" in color.	That clay can be decorated.		

GRADE I

WOOD

Objective.—To have the child feel real needs for wood as a material and to try to satisfy those needs.

Standard.—Does the child recognize needs for wood? Does he attempt to satisfy needs? Does he judge product to find out whether it satisfies needs?

Representative Activities

Attitudes

Making things child needs: bookcases, tables, doll house, furniture, easel, box for paints, vehicles.

Readiness in using wood to satisfy needs that demand that material.

Satisfaction in making something that satisfies purpose.

Feeling of need for planning.

Critical judgment of product in order to see ways of making it better. Helpfulness to others by passing along discoveries.

Knowledgees

That wood is used in real life: for furniture, woodwork, houses.

How carpenter uses hammer and saw. How he plans before he saws. How he measures to get pieces right lengths. How he gets better finish: sandpaper, paint, and stain.

Habits

Same care in using tools as in kindergarten.

Care in getting out material and putting it away.

Using tools for proper purposes.

Skills

Measuring by using one table-leg for unit, mark off lengths of other table-legs.

Recognizing essentials and working to satisfy essentials.

GRADE I

CLOTH

Objective.—To help the child to consider utility not only in using cloth when it is a suitable material but also in choosing the right kind of cloth for the purpose.

Desire for improvement through test of use.

Standard.—Does child choose cloth wisely? Does he sense defects in sewing and attempt to correct the defects?

*Representative
Activities*

Making things needed in play and in school activities: dolls and clothing for dolls; curtains and linen for doll house; aprons, dresses, hats; bags for gym shoes; costumes.

Attitudes

Appreciation of different kinds of cloth and of sewing process in making clothes; cloth for summer clothes, rain winter clothes, rain clothes.

Appreciation of work of others in group.

Helpfulness to each other.

Appreciation of color as a consideration in choosing cloth, having things "match", of decoration. Desire for better technique.

Appreciation of symmetry.

Knowledge

That cloth has greater value than paper. That paper can be used for planning in making pattern. That cloth may be decorated with: thread, block printing, stencils, appliqué.

That symmetry may be gained by folding cloth and cutting both sides at once.

That the hem is a means of keeping cloth from ravelling.

Habits

Orderly habits in care of material.

Planning before cutting.

Using a pattern.

Skills

Planning article, making pattern to make article right size.

Sewing seams that will hold.

Making hem to keep cloth from ravelling.

Cutting cloth double to get both sides alike.



PLATE IX. A series of pictures painted by a first-grade child, evidently the expression of nature-study experiences.

1. "A cat in a bush."
2. "The cat goes away; a bird comes and builds a nest."
3. "A little girl is happy when she finds the nest in her yard."
4. "The little girl cries when she later finds that the cat has come back."
5. "But the cat goes away without hurting the birds."
6. "Another little girl comes the next week and finds three bird's nests in the bush."

GRADE I

PAINT

Objective.—To help each child to use paint readily as a means of expression.
Standard.—Do the child's drawings show a growing responsiveness to feeling?

Representative Activities

- Painting pictures that tell experiences:
 (1) Story experiences.
 (2) Personal.
 (3) Imaginative.
 (4) Social studies.
 (5) Nature study.

Attitudes

- Realization of joy in "telling something" with paint.
 Appreciation of pictures first of all for meaning.
 Appreciation of pictures other artists have made.

Respect for idea in order that it may make child feel need for better technique.

Desire for better proportion between objects.

Knowledge

That drawing is used in many ways to tell many different things.

That we can tell things and understand what others have to tell through use of paint.

That earth and sky seem to meet.

Habits

See kindergarten.

Taking responsibility in care of paint equipment. Putting finished drawings in proper place.

Using crayons and manila paper and blackboard for additional drawings.

Skills

See kindergarten.

Controlling paint and brush.

Making objects more consistent in size in relation to each other.

GRADE II

Objective.—To help the child know the satisfaction of recognizing a worth-while idea, choosing a suitable medium, and being able to use satisfactory technique. To increase his appreciation of the work of others through his own experiences in using materials.

Standard.—Does the child have many ideas to express? Does he use judgment in deciding what ones he will express? Does he choose suitable materials? Does he have standards of workmanship? Does he have a critical attitude toward his finished product in that he sees mistakes and attempts a remedy?

GRADE II

CLAY

Objective.—To help the child choose things to make for which he feels real need; to get better technique in the things he makes through the necessity of satisfying that need; to appreciate clay as a material used by people in many ways.

Standard.—Are the ideas worth while? Does the child do the best work he is capable of doing? Does he realize in considering his finished product what part is well modelled and what part needs improvement?

THE ART CURRICULUM

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<i>Representative Activities</i>	<i>Attitudes</i>	<i>Knowledgees</i>	<i>Habits</i>	<i>Skills</i>
Similar to those of first grade, with improved technique.	Appreciation of clay as material for dishes and pottery.	That clay, when glazed and fired, will hold water.	See kindergarten and first grade.	Making products smooth; better handles, better proportion.
Making Indian pottery, cliff-dwellers' homes, adobe houses, Eskimo houses. Making simple tools for use in clay work.	Appreciation of Indian's clay work; decoration. Appreciation of his handicaps and his provision of tools.	Indian clay work. Coil method. Our development of clay products from crude Indian products to china.	Self-criticising and working for improvement. Helping others by suggestion.	Making Indian pottery by coil method.
	Appreciation of clay as medium used by sculptor: "Appeal of Great Spirit"; "Black Hawk."	Sculptors' use of clay.		

GRADE II

WOOD

Objective.—To help the child develop appreciation of wood as a material, to use it to satisfy felt needs, and to desire refinement in form in order that the material may more adequately satisfy those needs.

Standard.—Does the child use wood when it is the best material for the purpose? Does he make an effort to make the product adequate?

<i>Representative Activities</i>	<i>Attitudes</i>	<i>Knowledge</i>	<i>Habits</i>	<i>Skills</i>
Similar to those of first grade, with more technique.	Appreciation of source of wood.	Processes through which wood passes before we find it in our homes (briefly).	Care in using tools.	Controlling hammer and saw better.
Using wood in "raw" form, as Indian used poles for wigwams.	Appreciation of Indian's use of wood and added refinement in our use.	More tools to enable better technique: plane, gimlet.	Care in choosing kind of wood for purpose.	Planing with the grain.
	Appreciation of adequate use of wood: chairs that are strong—tables that will not rock.	Better finish.	Use of boxes if sufficient wood is not available.	Measuring with more accuracy.
	Appreciation of decoration which fits object it decorates.			

GRADE II

CLOTH

Objective.—To help the child to use cloth and the sewing process when there is need and to have a conscious desire to sew well in order that there may be satisfaction in accomplishment. Realization of the great number of possibilities of cloth as a material through the appreciation of its uses.

Standard.—Does the child find real need for sewing? Does he respond to need by making something? Does he try to satisfy his own standards of workmanship?

<i>Representative Activities</i>	<i>Attitudes</i>	<i>Knowledge</i>	<i>Habits</i>	<i>Skills</i>
Similar to those of first grade, with better technique.	Appreciation of fitness to purpose in respect to things children make.	Kinds of cloth, not only for summer and winter but for different occasions.	Using sewing when there is need.	Planning first, then cutting to fit.
Making costumes for special plays:	Attitude of judging from use and sensing the most apparent inadequacies in products.	Indian weaving: rugs, blankets.	Caring for materials. Making contributions to group in form of suggestions.	Planning decoration. Making better seams and hems.
Indian costume.		How he used design to express meaning.		
Dutch costume.				
Weaving in group, making blankets and rugs such as Indians made.	Appreciation of Indian weaving, designs.			
	Appreciation of color in choices.			
	Appreciation of decoration.			

GRADE II

PAINT

Objective.—To help each child to feel the need for better technique as a means to help him to better expression.

Standard.—Does the child have ideas to express? Is he sufficiently interested in his own ideas to want to express them well? Is he improving in technique?

*Representative**Activities*

Using drawing materials to tell experiences:

- (1) Personal.
- (2) Imaginative.
- (3) Story.
- (4) Nature study.
- (5) Social study.

Making scenery for plays.

Attitudes

Appreciation of drawing as means of expression.

Appreciation of Indian's use of drawing.

Appreciation of expressions of Dutch painters about their country.

Appreciation of way Dutch painters showed distance in pictures.

Joy in additional technique.

Enjoyment in each other's work.

Knowledge

That drawing is a medium used as a means of expression by every race.

That objects far away are small.

Objects far away are nearer horizon.

That pictures look better if not "crowded."

Habits

Using crayon as additional medium to supplement easel work.

Taking responsibility in care and mixing of paint.

Observing objects and looking at pictures to help tell story more truthfully.

Skills

Additional skill in handling of brush, in showing proportion, in using perspective, in making better compositions

Doctor Bonser has defined the curriculum as: "The sum total of the activities through which the needs of life are satisfied, arranged in that sequence which fits them to the progressively expanding interests and capacities of pupils." * In the light of this definition we find that such a record of representative activities and consequent establishment of those attitudes, knowledges, habits, and skills as will help the child to satisfy his needs, forms the basis for the art curriculum. Alertness and sensitiveness to the children's needs are emphasized in making such a record. As a basis for the curriculum, then, it will bring to the curriculum that plasticity that is essential in adequately meeting ever changing conditions.

* Bonser, Frederick G., *Elementary School Curriculum*, pp. 86. (Macmillan.)

XIV

ARRANGEMENT OF CLASSROOM

Work Inspiration of a Well-Arranged Room.—With the coming of the workshop to take the place of the “tin-soldier” arrangement in the formal classroom, many order-loving principals and superintendents who are believers in the newer education open the doors to the kindergarten and lower primary rooms with qualms at the confusion and guilty feelings at the disarrangement. The schoolroom should exist, first of all, for the use of the children, although we might judge from some of our childhood experiences that it existed to be kept neat and clean.

In the arrangement for work, under conditions of freedom, the room is apt to have an uninviting appearance. Much can be done toward proper organization and arrangement of a room without interference with the desired freedom of work. A room can be so “helter-skelter” as to make work almost impossible. Every one has stepped into a workroom so “cluttered” that it was hard to resist stepping out again. Every one has experienced a workroom so attractively arranged as to inspire a desire to work. Every room presents its individual problems, but every room should be studied carefully, first for useful and then for beautiful arrangement.

Any room is more satisfying when the furniture is arranged in “units.” Utility should be the basis for grouping into units. For instance, the work-bench, tools, and box of wood

make one unit; the clay, clay-table, and crock, clay-boards, and oilcloth, another unit; the easel, brushes, and paint still another group. For convenience all the materials that require much hand-washing should be near the lavatory. The stationary furniture should be placed so as not to interfere with the large space needed for games. Light is another factor in arrangement, since the children must never work in dim light or facing the light.

After the room is arranged for convenience much can be done in addition to make it more beautiful. The color of the walls is important. There should be the feeling of lightness and happiness that is suggested by light colors. The woodwork should be light. The woodwork and walls make up the background of the room, and the color, though light, should be very much grayed.

Consideration of Child.—In planning a kindergarten or first-grade room, one must constantly remind oneself that it is a child's and not an adult's room. Nothing will help so much in planning as to sit down on the floor with the same eye level as that of the child and look around. For the first time we realize how little we respect childhood as an enjoyable and vital part of life; by the very arrangement of our rooms we make the child feel that nothing is worth while until he grows up to it. It is true that tables and chairs are appearing in his sizes, but he cannot see out of the windows, he cannot reach the door-knob, and the pictures are so high that they seem to belong to another world.

Pictures should be hung near the eye level. The bulletin-boards on which the children's work is displayed should be placed low enough so that the children can comfortably put up and take down work.

Suitable Pictures.—Pictures for kindergarten and first-grade walls should contain large masses with strong silhouettes and strong colors rather than much detail and subtle color. The color sense and optical co-ordination are not highly developed in little children. Pictures must be sufficiently strong in stimuli to make an impression if the children notice them. The subject should include something within the child's experience. Fragments of works of art are not appreciated by little children. Children do not necessarily demand pictures that tell stories. This mistaken idea has arisen from the fact that comparisons of the effect made upon children by pictures that tell a story and pictures that express feeling or emotion have been based upon pictures expressing emotion never experienced by children. Children enjoy other than narrative pictures if they fall within the range of their experience.

Smaller pictures that are not framed should be mounted. The mount should be a substantial cardboard; the color should echo or repeat softly one of the dominant colors in the picture. The mount should be within the range of the picture, not lighter than the lightest spot nor darker than the darkest spot. The strongest contrast should be in the picture and not between the picture and the mount. The stronger the contrast the more the attraction. Many mounts attract more attention than the pictures. The margin depends on the size and kind of picture, but it should usually be equal at top and sides and always wider at the bottom.

Arrangement of Bulletin-Boards.—Bulletin and display boards may be disconcerting, or they may be satisfying. Where there is much small material to be displayed, it is better to group the material to carry the impression of a

larger unit whose general shape conforms to the shape of the background. The picture for one group may be selected from shapes that fit well together, and from repetition of a common color. The same rules for margin used in picture-mounting should be applied to the arranging of bulletin-boards.

The larger pieces of furniture should be placed in line with the walls of the room, in order to seem a part of the room. Everything in the room should be there because it is needed. The senseless little paper baskets that children make from dictation and which the teacher hangs around the black-board for decoration are the results of misdirected æsthetic aspirations.

The eternal "fitness to purpose" should direct all effort toward enrichment. To have little children spend time making things for which they feel no need, that are obviously for use and still not usable, and then use them for decorations, is an insult to their intelligence and a delusion in the name of art.

XV

SUMMARY OF ART PRINCIPLES NEEDED IN WORK WITH LITTLE CHILDREN

“John wants to make his road look flat and far away. He says it looks as if it climbed a hill. I don’t know how to do it myself, so I can’t show him.” Such statements from teachers of little children show that they are handicapped by the lack of knowledge of the “race experience.” The understanding of a few simple but essential principles of drawing and art structure will enable the teacher to give the child the help he needs.

DRAWING

Drawing is a tool, the use of which is conceded to be of scientific, industrial, and æsthetic importance to every one. The child in school needs drawing as a means of expressing his ideas and experiences. The average citizen also needs drawing to enable him to express himself legibly and quickly. It may be that the drawing is needed to make clear an idea to a professional draftsman. It may be needed to show the architect what is desired or to copy a hat. The use of a skill additional to that required to express legibly the idea is desirable and enjoyable, but not necessary. However, in developing this ability to draw we cannot anticipate whether individuals will wish to sketch hats or maps. Therefore, instead of teaching how to draw certain objects, we must teach drawing principles that will enable him to draw anything.

SERIES OF CHILDREN'S PICTURES SHOWING
IMPROVEMENT IN PROPORTION

PLATE X. KINDERGARTEN.

The flower is larger than the tree; the boy is larger than the house.
(See page 108.)

PLATE XI. FIRST GRADE.

Notice improvement in relative proportion between the house, the automobile, and the man who is getting into the automobile.

PLATE XII. SECOND GRADE.

Notice that there is improvement in proportion in individual objects as well as improvement in relative proportion between objects.

(Also note improvement in color.)



PLATE X. "Little boy, with flower and Christmas tree, who lives in house with the steps."



PLATE XI. "My father goes away every morning."



PLATE XII. "Grinding corn."

A suitable medium is essential to expression. The adult finds a pencil his most convenient medium. He makes a quick sketch to explain more clearly his idea. He uses a pencil because he carries a pencil with him; he is not always equipped with crayon, water-color, or charcoal. However, the pencil is not a medium suited to the needs of a child. His stage of development, both psychological and physiological, requires a medium that encourages large, quick work. He is stimulated by color. The medium best suited to self-expression of little children is large paper, brushes, and paint.

"Learning to draw is learning to see" is an old adage with which every one is familiar. However, the sage failed to add that learning to see is a long, difficult process. We may learn to see correct outline of form and then find that we have great difficulty in learning to see correct lights and shadows, and still more difficulty in seeing color. As with other complicated processes, we must allow time for mastery.

Anything that can be seen can be drawn. We can imagine how a kodak picture of an object would look. We get the image on the retina in exactly the same way. It is a puzzling problem to represent three dimensions on two. It is solved by observing carefully the direction of the lines and putting the lines on paper as observed.

Proportion.—Children are at first satisfied to make crude silhouettes without attempting to show distance or proportion. Proportion is an essential of good drawing. The first class discussion of proportion should be based on relative sizes of objects with a view to correcting first the larger mistakes. The children may draw flowers higher than the house in a picture. They may be led to correct ideas of relative sizes of flowers and houses by looking out the window at flowers

or by placing a growing flower on the floor. Observation will show the children how tiny a flower is compared with a house. It is important that the children make the man so that he can actually walk through the door before they attempt to make a head small enough to be carried by the legs that support it. Later they may study the proportion of the individual figure and discover that it is divided "one-one-one"—shoulder to waist, to knee, to foot, with head added; also, that in order to get action, the figures can be drawn as stick figures until the desired action is gained, and then the flesh and clothes added.

The first step in the improvement of drawing trees is to make them in proportion to the houses. The second step in improvement is made possible when the child becomes conscious of the varying shapes of trees, rectangular, triangular, oval, and semicircular, and attempts to represent these shapes. It is not until children are much older that they are able to see the roundness of a tree and that this may be shown by proper distribution of dark and light.

In landscape drawing the earth and sky seem to meet at the sky-line. The kind of sky-line varies in different types of landscapes. A straight line suggests the plain or the sea; long curved lines suggest rolling hills; the uneven jagged line placed high on the paper suggests mountainous country.

Landscape Perspective.*—Distance is represented: (1) by making near-by objects large and distant objects small; (2) by placing near-by objects low on the paper and objects farther away nearer the sky-line. Distance may also be shown by grayed color, for objects farther away are much grayer in color than objects in the foreground; but, as children are

* See p. 50.

not able to see differences in color readily, distance represented by size and placing should be discussed and worked on long before there is any reference to differences in color.

Perspective of Circle and Rectangle.—Every object has some similarity in shape to some geometrical form, the most common of which are circular or rectangular. Foreshortening that form will help in foreshortening the object. A sphere appears as a sphere in all positions. A circle viewed obliquely becomes an oval; the more obliquely it is viewed the narrower the oval appears. Above the eye level the circle curves up; below, it curves down.

The rectangular solid presents a more difficult problem. Parallel lines or their continuations meet on the eye level. Therefore, lines above the eye level come down and below the eye level come up. The vertical lines remain vertical.

These principles are generally discussed in the higher grades, but when the boy wants to know how to make his house “stand up” and “go back” as houses appear, his teacher must know how to suggest keeping the vertical lines vertical to avoid a “wind-blown” appearance, and how to show him that the nearest vertical line is longest, and that the line at the top of the roof slants down, and the line at the bottom of the house slants up.

The teacher must be prepared to show John how to see into the well if his questions indicate that he is ready for such help while he is drawing Jack and Jill.

Giving Children Help as Need Appears.—The principles of drawing should be given to the children as the need appears. Since there are many mistakes, only those should be selected for correction which involve principles for which the children are ready. Group rather than individual discussion

should be used in order to avoid waste of time and to gain the benefit of the variety of contributions of the children. After a principle is discussed, the children should have an opportunity to talk over the drawings of the members of their group, pick out the best pictures, and show the ones who have done poorer work how, by observing the principle discussed, they might improve their pictures.

Pictures can be of much assistance in teaching principles, but observation of the real objects is more valuable as a foundation for future drawing. One group had learned to show distance by size, but could not show distance by placing. A discussion of the problem was followed by having the children go to the windows and see what appeared lowest on the glass, and what a little higher, and so on until they discovered that the higher on the glass the objects were the farther away they were, until they came to the horizon-line. The children then went back to their pictures and discussed how each could improve his picture in consideration of what they had just learned. After that they examined the pictures in their room to discover what part was farthest away and what closest to them, explaining how they knew.

Children are so confused with realities that they find it very difficult to see things as they appear instead of as they actually are. Teachers will find that even the simplest principles must be gone over again and again before the children are really observing them. Learning to see is a puzzling process. It cannot be rushed, and the child should not be forced to observe these principles in his drawing before he is able to distinguish appearances from actualities.

PRINCIPLES OF DESIGN

Many people have the mistaken idea that principles of design are the results of the arbitrary agreement of a group which decides, from time to time, what is good and what is bad in art. Individuals find themselves possessed of a little code made up of what is good and what is bad. For instance: "It is good art to hang a picture with two wires, and it is bad art to put furniture across the corners." In reality, the principles of art structure are the result not of arbitrary agreement, but of investigation and analysis of feeling of what is pleasing. The same principles are universally applicable; the same satisfaction of balance controls the arrangement of a room or of a printed page. It is true that a lifetime devoted to investigation and application may leave untouched many exquisite manifestations of art principles. However, the understanding of a few underlying principles by the average individual opens to him a richer life.

Unfortunately there is no universal nomenclature for art principles. Usage is unifying the terms, and, in time, significance and use will have established as definite terms for the various principles of art as we now have in music.

Fitness to Purpose.—The first principle to be considered in work with little children is the principle of "fitness to purpose," or utility. All improvement in technique in the use of materials is approached from the standpoint of this principle. The designation of the principle, "fitness to purpose," is self-explanatory. Everything that exists for a purpose is limited by the requirements of that purpose. The first test of the excellence of any article is how well it meets the requirements, or how closely it approaches fitness to purpose.

Real delight in articles purchased is assured if one, after having carefully analyzed the need that suggests the article, will keep the requirements constantly in mind until the right article is found. To be sure, it is a difficult feat to perform with the modern shops displaying many distractions.

Instances of Violation.—One violation of the principle of utility results from misdirection of an over-æsthetic sense. From a desire to be artistic without the balance-wheel of utility, the most ridiculous atrocities result. Decoration must always be a part of the object it adorns, must enrich it and increase its loveliness, services which, of course, it cannot perform if it interferes with the function of the object. If, on account of an attempt to make it beautiful, a pitcher fails in its purpose to hold a liquid and allow a liquid to be successfully poured from it, it can never be a satisfaction. The portière, which obviously has as its reason for being the separation of two rooms, is ridiculous when it appears made from beads. A vase that has capacity to hold many flowers should not have a base so small as to allow the most delicate flower to upset it, and a neck so narrow as scarcely to permit one small stalk to be squeezed into it.

The second violation of the principle of utility is the use of a less expensive material to imitate a rarer article in an attempt to make "one just as good." Imitation leather, imitation fruit, imitation grass-cloth, imitation flowers cannot satisfy the principle of fitness to purpose, because they are made from "make-believe" materials and cannot possibly perform the real functions of the materials they imitate. For example, fruit exists for food. Put in its place a bowl of artificial fruit and try to justify it from the principle of utility.

As was previously stated, every principle of art regarded

gives enjoyment, and disregarded gives displeasure. The application is universal. The principle of utility is not limited to fine arts. Conversation, clothes, music, and decoration give pleasure when they are consistently selected and used. Perhaps nothing is so completely disgusting wherever it appears as imitation.

Teaching Children Principle of Utility.—Much can be done to teach the principle of fitness to purpose to little children. The teacher can talk about their clothes, discussing with the children how their different clothes are made for different kinds of weather and for different social situations. The children can easily recognize the difference in their raincoats to keep them dry, and their wool clothes to keep them warm; their rubber boots, their leather boots and sandals; their play clothes and party clothes.

In making any articles the children and teacher should discuss what would be the best material and arrive at the decision by analyzing the essentials of the article. The articles should be examined after they are made and tested in order to discover how well they fit their purpose.

In planning the classroom the teacher should first of all decide on the real purpose of the room; then the things for the room should be chosen and arranged with a view to meeting those requirements. This will eliminate many senseless decorations and substitute articles that are genuinely beautiful. It will allow the cupboards to be unblushingly a part of the kindergarten room. It will eliminate the decoration from the top of the piano, since the piano is a musical instrument and does not need a fern to decorate it any more than a violin needs a bow of ribbon. It will result in the basis of a beautiful room in that it, first of all, is admirably adapted to its purpose.

Adaptation.—Adaptation is the process by which fitness to purpose is accomplished. “Conventionalization” is the term that was formerly used to designate the principle. The term “conventionalize” suggested changing a motif until it, having received some peculiar or distorted shape, might be considered a design. The term “adaptation” suggests taking a motif and material and changing it so that it fits certain requirements; this later term therefore much more accurately describes the principle. One sees in dishes, furniture, books, and many other things lack of application of this principle. Because something in nature is beautiful it is used as a decoration in the belief that it will continue to afford pleasure. This is impossible, because it has not been adapted to meet its new conditions. The beautiful bluebirds painted on a plate; the picture of the President on a sofa cushion; Niagara Falls, a panting dog, or red roses reproduced in a rug—these are only a few of the ridiculous results of planning decoration without application of the principle of adaptation. Nature affords motifs, but these motifs must be changed. The test of a good design is not how much it resembles the natural motif. This was unfortunately the idea of the woman who bought a vase because it was decorated with grapes so realistic that she thought she could pick them. The motif may be considered the raw material and the design the finished product; the test of the product is how well it fulfills its purpose, and not how much it resembles the raw material. Many things are made from wood: desks, chairs, tables, bookcases. Not one resembles the tree as it grows, yet that fact does not detract from the excellence of the article.

Balance.—Balance is, perhaps, the most commonly appreciated principle of art. It is first realized when one learns to

walk. There are very few people who are not sensitive to balance. The small boy speaks of something being "lop-sided," or one hears of something being "top-heavy." Both criticisms are aimed at lack of balance.

Kinds.—Two kinds of balance are recognized. In apparent (or formal) balance, one object or attraction is balanced by a duplicate object or attraction equally distant from the centre. Formal balance is observed in formal public buildings in Colonial houses, in the human figure (front or back view), in Greek temples, in the violet, pansy, and sweet pea, and in the pictures "The Last Supper" and the "Frieze of the Prophets."

In hidden (or informal) balance, the object or attraction is balanced by a different object or attraction unequally distant from the centre. Informal balance is observed in the bungalow, in the human figure (side view), in landscapes and trees, and in the pictures "The Madonna of the Chair" and Whistler's "Portrait of His Mother."

Perhaps the seesaw affords the first working knowledge of balance in the experience of the individual. The principles discovered there are universally applicable. If the weights are equal, each requires the same amount of board, and they are, therefore, the same distance from the pivot, or the centre. This is formal balance, or equal weights. If the weights are unequal, they balance at different distances from the centre. The heavy weight must slide toward the centre. The lighter weight must slide toward the end. In the process of getting ready to seesaw, it is usually discovered that where unequal weights are to be balanced, the heavier weight must be placed nearer to the centre and the lighter weight farther from the centre. This is the principle of informal balance.

The principles of balancing actual weights are quite simple,

since every one has had experience with the comparative weights of objects. Difficulties in balance arise when pictures are to be hung on walls or when pages, rooms, and bulletin-boards are to be arranged. The same principles apply. In place of "weights" the term "attractions" should be substituted. Where unequal attractions are to be balanced, the greater attraction should be placed nearer the centre and the lesser attraction farther from the centre, and on the opposite side.

By the term "attraction" is meant that quality which absorbs interest. Every dot, line, mass, or color constitutes an attraction. Several factors determine the relative amount of attraction an object possesses:

- (1) Size. All things being equal, the larger of two objects constitutes the greater attraction.
- (2) Color. The more intense the color, the greater the attraction. A small amount of bright color may balance a large amount of dull or grayed color.
- (3) Contrast in value. The stronger the contrast, the greater the attraction. Black against white makes a very strong attraction, while two values close together makes a lesser attraction.
- (4) Variety in contour makes for stronger attraction. The less the object conforms in shape of outline to the objects near it, the greater the attraction. A large piece of furniture that conforms in outline to the lines of the room will have less attraction than a small table holding a vase with variety in contour. A rectangular picture has less attraction than a

round picture. (Again it is necessary to remember that attraction does not necessarily mean satisfaction.)

Little children have observed the principles of balance in their seesaws and in weighing groceries when they play store. They can be led to observe the same principle of balance in the decorations of a room, their clothes, in flowers, and in their pets. When they discuss balance they will point out and talk about other instances where it is observed. Balance should be discussed in connection with the decorations children plan and pictures that they paint.

Much can be done to restore balance in classroom arrangement if attractions are taken into consideration. The large pieces of furniture may be balanced by use of bright color in a picture or a vase. The bulletin-board should be arranged to balance as a unit and at the same time to take its proper place in the arrangement of the room.

Rhythm.—Rhythm is related movement. It is gained by repetition, but it must be orderly repetition. Petals arranged on a flower show a regular repetition of a shape; the result is pleasing; the same petals or shapes when scattered are repeated, but repeated without order, and give no particular enjoyment.

Development of Rhythmic Sense.—There is undoubtedly earlier response to rhythm than to any other art principle. The members of a savage tribe dance in response to the regular beating of a stick. The tiny baby watches intently the regular movement of a swinging ball. An undeveloped sense of rhythm responds to a monotonous unaccented repetition. Examples of the delight in this elemental rhythm are

furnished in the art and music of the savage tribe. As the sense of rhythm becomes more developed there is less pleasurable response to monotonous unaccented repetition. In music the simplest accented repeat is march time, which is the first to be enjoyed after the unaccented time ceases to please; later, waltz time is appreciated. Early poetry was in the form of a regular unaccented chant, which developed into the complicated rhythms of modern poetry. The development of the sense of rhythm may also be traced in art from the regular repetition of simple lines in borders to the repetition of units with accents, and later the freer, more complicated repetition of line, mass, and color that occurs in masterpieces.

Every one understands the desire to respond to the rhythm in music by singing, dancing, or marching. Yet, few people realize that it is the stimulation of the same sense of rhythm that holds them spellbound before a sea which rolls up white-caps and breaks them against a rocky coast in a marvellous mass, repeating again and again the same satisfying curves. The same delight is felt wherever one experiences repeating or echoing lines, masses or colors; in the repeating curves of the weeping willow as it waves in the wind; in the curved lines of the Lombardy poplars; in the long lines of the low hills against the sky; in the stately perpendicular lines of the tree trunks in a pine forest; in the skyward-stretching lines of a Gothic cathedral, and in the earth-echoing lines of the Greek temple.

Rhythm Needs of Little Children.—The rhythmic sense, then, though elemental and universal, develops with use, and therefore in work with little children no attempt should be made to force appreciation of complicated rhythms which they do not yet feel.

The children may satisfy their desire for repetition by repeating a unit in one direction to form a border, or in two directions to form all-over patterns. Borders may be made for their clay-bowls and booklet covers; borders and all-over designs may decorate their aprons and their doll clothes.

Children can appreciate rhythm in line and realize that satisfaction is gained where there is repetition of line, mass, or color. The serving of milk made the children in a first-grade class feel the need of napkins. They made them of unbleached muslin and planned a decoration. In a discussion of the designs which were to be cut out of cloth and appliquéd on to the napkin, one design was uniformly liked. The question was asked: "I wonder why you like John's pattern best." One boy responded: "Because it kinda fits in the corner of the napkin," indicating with his hands how he had the feeling of its fitting in. Every design that gives real æsthetic enjoyment must rhyme with, echo, or fit the space it decorates. The children had developed one of the most important applications of the principle of rhythm. They looked around the room for lines that "fit" and discovered them in the lines of the room, the blackboard, floor, books in the bookcase, and in pictures on the wall. One day the children astonished their teacher by pointing out the lines and masses in "The Madonna of the Chair" that "fit" the circle.

The satisfactory arrangement of booklet covers, of placing a name on an invitation, decorating a programme, or mounting a picture involves the application of the principle of rhythm.

In room arrangement the lines of the larger attractions should echo the lines of the room. The folds of the curtains should form soft lines, repeating the straight lines of the

walls. The mount must fit or rhyme with the picture it is to hold. The material arranged on the pages of a book, or on a bulletin-board, must conform with the straight lines of the borders. Variety is introduced in the details.

Violation of the principles of rhythm results in unrest and confusion. Children who have a tendency to violate the principle of rhythm by placing things "cornerwise" do so not from a natural inclination, but because of having seen it done. Few children fail to recognize, at least in some degree, beauty. They may be led to observe also the principles of rhythm which lead to restful satisfaction.

Unity through Subordination.—Subordination is the means of gaining unity. It is the subduing of less important parts to emphasize the whole or to accent more important parts. The petals of a rose are so arranged that no individual petal attracts attention, but each contributes to the whole—the rose. Leaves and branches are subordinated to the tree.

The "centre of interest" is established by arranging every detail so that it contributes to, rather than detracts from, the important feature. Subordination of parts may be gained through size, placing, contrast, or color. Little children emphasize and subordinate almost entirely by means of difference in size. They draw very large that which interests them, and very small that which does not interest them. Thus the flowers in their drawings may grow to the level of the house-top, and the man may be shown twice as large as the trees among which he walks. In their means of subordination children apparently repeat the race experience. Many of the early Christian paintings show the Madonna emphasized by size. In some cases the Madonna is many times larger than the surrounding figures. Later artists discovered that,

though maintaining consistent sizes, they could still make the "centre of interest" dominant by making each element add its share to the theme through careful arrangement of the contributing parts.

Later, children wish to know other means of emphasis. The teacher may ask: "What is the most important thing in our picture?" or "What do we most want to show by our poster?" "Then, how can we make these things seem most important to the people who look at them?" Using the children's suggestions as much as possible, the teacher can lead them to see how less important parts of the picture, project, or decorations may be subordinated by means of color, size, or placing.

In the arrangement of displays of children's work, much can be done to avoid the appearance of a hopeless conglomeration by the subordination of individual articles through grouping. The articles may be grouped on the basis of a common color, material, or interest.

Unity in the classroom may be gained through consistent emphasis and subordination of parts. Spots of interest may be established through grouping. The centre of interest should be reserved for the things that deserve the most attention. A primary teacher painted her waste-basket, clay-can, and wood-box a brilliant yellow, because "little children love bright color." As one entered the room the yellow articles leaped out and demanded undeserved attention. How much more consistent and satisfying was the room across the hall. The teacher had subordinated the unimportant waste-basket and clay-can by painting them to harmonize inconspicuously with the furniture in the room. The bright color was supplied in pictures, in flowers, in bright accents of pottery, and in

the arrangement of the bulletin-board. The furniture was grouped in units, each unit subordinated to the whole.

To have established unity through subordination and emphasis is to have gained the intellectual satisfaction of organization and the æsthetic satisfaction of harmony.

Color.—All color can be classified as belonging to one of five typical color groups, or families: red, yellow, green, blue, and violet. The five typical colors may be arranged around a circle, and between each two colors may be inserted the proper hues, as blue-green between blue and green. The colors that occur opposite each other on the color circle are called opposite, or complementary, colors. If mixed together they produce gray, or neutrality.

Three qualities are essential in accurately describing a color:

- (1) Hue is that quality which names a color. It classifies the color into one of the five large groups, and may additionally classify it by indicating its tendency toward a similar color, as blue green or red violet.
- (2) Value refers to the amount of light in a color without reference to hue or intensity. The value scale ranges in equal steps from black to white. Strong contrast in values results in strong attractions. Values that occur close together on the scale constitute lesser attractions.
- (3) Intensity, or chroma, means the strength of a color. It refers to the saturation, or to the degree of removal from neutrality. A color may range in intensity from pure color to grayness. A color is grayed, or neutralized, by adding its complement.

SERIES OF CHILDREN'S PICTURES SHOWING
IMPROVEMENT IN USE OF COLOR

PLATE XIII. KINDERGARTEN

Child has used all colors indiscriminately.

PLATE XIV. FIRST GRADE.

Child has selected certain colors.

PLATE XV. SECOND GRADE.

Child has used different values of one color with accent of analagous colors.

(Also note improvement in proportion.)



PLATE XIII. "A basket of fruit, with a chair and a tree."



PLATE XIV. "The house with the fence."



PLATE XV. "The train going through the mountains."

Harmony involves having something in common. Colors may be harmonious if they have a common hue with variety in intensity or value, as, light green and dark green, or gray green and bright green.

Colors may have a common value and vary in hue or in intensity or may have a common intensity and vary in hue or in value.

Hues that have a color in common are called analogous: blue and green or blue and violet. Analogous colors form a close harmony. Hues that are opposite, or complementary, intensify each other and must be neutralized, each one taking on some of the qualities of the other, if they are used together. Before two hues can be used together they must have some common qualities.

Values form close harmonies when they occur close together on the scale, and strong contrast where they are far apart. Where there is reason to attract attention, use contrasting values. Where subtle background is desired, keep the values close together.

Intense colors attract attention. Grayed color is retiring.

Color may be classified into cold and warm color. Cold colors have a predominance of blue and suggest ice and coldness. Warm colors suggest heat and are those having a predominance of red and yellow. Much can be done psychologically in warming or cooling a room by means of color.

Children's Use of Color.—Children first see differences in hue. They should learn the five typical colors, which should be spoken of as color families. They should collect color and classify as members of one of the five families.

Later they observe differences in value light blue and dark blue. Differences in intensity are not readily recognized, and

should be discussed after the child has had much color experience.

After he passes through the experimental stage, in which he uses all colors together, the child enjoys simple color harmonies. He enjoys combining values of one color with one accenting color, and he likes to have things "match" in color. He soon enjoys tints of color, lighter in value than pure color but just as intense as are observed in his enjoyment of pinks and pale blues and greens. Grayed color looks faded to him. All color should be more intense for the child than for the adult because of the child's undeveloped color sense. To insist on giving a child grayed color is injurious, both physiologically and psychologically. Physiologically, it is through use that the cones, the end organs of color, are developed. If color is very much grayed the stimulus is not sufficient to enable the child to see color at all. Through lack of use the color sense will not be developed. Psychologically, children crave brilliant color. If they do not have it at the proper time an abnormal desire for pure color may appear in later life, at a time when they should naturally be enjoying subdued color.

Color in Classroom Arrangement.—In the consideration of color in the classroom the teacher must remember that the walls, floor, and ceiling are background and should be kept so by being done in grayed color. In order to keep the woodwork from attracting attention apart from the wall, it must be closely related to the wall in value. The bright color in the room should be reserved for the spots which should have attention. The child delights in color and should have it around him in abundance, but it must be intelligently used in order to be of value in his development.

The understanding of art principles provides stepping-stones by which the child ascends to powers of more adequate expression. "When the child comes to have the habit of looking at his own products, of comparing them with his original image, and of criticising one by reference to the other (without being unduly discouraged and thus paralyzed) the battle for technique is, in principle, won. The crying evil is the abstraction of the technique, making it in reality only a means toward the true end—free expression—an end in itself."*

* Dewey, John, "Imagination and Expression," *Kindergarten Magazine*, September, 1896, pp. 61-69.

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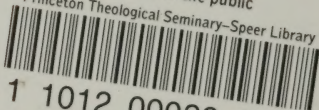
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